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MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.

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A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.

EDITED BY

PROFESSOR G. F. STOUT,

WITH THE CO-OPERATION OF DR. E. CAIRD, PROFESSOR WARD, PROFESSOR PRINGLE-PATTISON, PROFESSOR E. B. TITCHENER, AND OTHER MEMBERS OF AN ADVISORY COMMITTEE.

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OF

PSYCHOLOGY AND PHILOSOPHY

I.—ON THE FIRST PART OF PLATO'S *PARMENIDES.*

By A. E. Taylor.

I think I shall not stand alone among readers of Plato when I say that I was a little startled by Mr. Benn's article on "The Later Ontology of Plato," in Mind, N.S., No. 41. The interpretation given in that article to the *Parmenides* and *Timæus* was, from my own point of view, so revolutionary, and yet the known learning and ability of the interpreter so great, that my first impulse was to rub my eyes and ask myself whether, in the language of Plato himself, I had been "dreaming with my eyes open" in all my previous study of the dialogues. As I read on, however, I thought I could detect one or two significant indications that the learned author of *The Greek Philosophers* had for once written, as the psalmist spoke, in his haste. For instance, at page 40 of Mr. Benn's article I read of the "refusal" of Plato in the *Timæus*, "to acknowledge an independent and isolated existence of the Ideas".[1] But in the *Timæus* itself (51 B-52 A) I found the strongest and most emphatic declaration of the "separation," in some sense or other, of Idea and sensible thing to be met with in the whole of the dialogues. So

[1] I entirely fail to see how the second footnote on the same page, according to which Plato would "not have agreed with Descartes . . . that the idea of perfection involves that of existence," is to be reconciled with *Sophistes*, 245 *d*, τὸ γενόμενον ἀεὶ γέγονεν ὅλον· ὥστε οὔτε οὐσίαν οὔτε γένεσιν ὡς οὖσαν δεῖ προσαγορεύειν τὸ ὅλον ἐν τοῖς οὖσι μὴ τιθέντα κτλ.

again, at page 48, I found Mr. Benn speaking of the "unanimous tradition" of Greek philosophy that "like can only be known by like" in a way that showed that he must for the moment have forgotten the rival doctrine of perception by opposites hinted at by Heracleitus and elaborately worked out by Anaxagoras. And again I did not and do not know what to make of the remarkable assertion that Parmenides identified space with "pure reason" (*op. cit.*, p. 42). These are perhaps small points, but they do not augur altogether well for the accuracy or the judgment of the writer, and it is therefore with the less hesitation that I venture to call in question Mr. Benn's whole theory of Plato's later ontology.

In holding that certain of the later Platonic dialogues represent a wholesale reconstruction of the metaphysical teaching of the *Phædo* and *Republic*, Mr. Benn is, of course, in accord with Dr. Jackson and Mr. Archer-Hind. But it is rather disconcerting to find that his view of the line which the reconstruction took is directly opposed to theirs. According to Mr. Archer-Hind the radical defect of the metaphysics of the *Republic* was Plato's failure to insist sufficiently upon the transcendence of the Idea and its absolute severance from the sensible thing; according to Mr. Benn it is precisely this transcendence which the *Republic* teaches, and which it is the aim of the *Parmenides* and *Timæus* to do away with. The *Parmenides*, in fact, is intended to show that the transcendent Idea is a purely "nonsensical conception," while the *Timæus* provides us with a positive substitute for it. Thus, if Plato really in his old age undertook the remodelling of his fundamental doctrines, we must suppose that he expressed himself so obscurely that two learned and devoted students can contradict one another point-blank as to which is the original doctrine and which the amended version. I submit that the supposition is a most unlikely one, and that the disagreement of the interpreters strongly supports the view, which I wish to urge in this paper, that there is no real difference of principle, but only a difference in the fulness and mastery with which an identical principle is set forth, between the earlier and the later dialogues. In the present paper I propose to confine myself to the consideration of Mr. Benn's views on the *Parmenides;* I may perhaps have the opportunity to deal with some points in his interpretation of the *Timæus* in a later article.

The thesis which I wish to maintain is briefly this. There is no essential difference but a most essential agreement in respect to the position of the Ideas between the *Parmenides*

and the *Phædo*, with which dialogue the *Republic* is universally admitted to be in complete accord. What difference there is is simply due to the fact that the *Parmenides* expressly recognises and attempts to answer questions of which the earlier dialogue simply presupposed the solution. If this can be established it will follow that the *Republic* must still possess for us the central position which it has always hitherto held in the exposition of Platonic philosophy, and the various recent theories which see a revision rather than a development of its teaching in the later dialogues will have to be abandoned. My purpose, as far as the *Parmenides* is concerned, will be accomplished if I can show that both the problems and the results of the dialogue are inevitably presupposed by the view taken in the *Phædo* of knowledge and its objects. In arguing this point I desire to confine myself in the main to the earlier portion of the dialogue (pp. 126-136), in which Parmenides states his objections to the doctrine of Ideas as formulated by the youthful Socrates. Of the longer and more perplexing second half of the dialogue I have previously propounded an interpretation,[1] in the main agreeing with that of Zeller, but very different from that suggested by Mr. Benn. From his silence I infer that he does not think the principle of that interpretation worth examination, while I for my part am as strongly convinced as ever of its general rightness; hence controversy on the point would probably be useless. As however the key to the second part, in my judgment, lies in a right understanding of what goes before, it will be enough for my purpose to deal with the introduction, as we may call it, to the dialogue, which was rather too perfunctorily treated in my former papers.

For the right understanding of Plato it is most important to realise from the first that the antithesis between a period of "transcendent" and another of "immanent" Ideas in his philosophy is a false one. If you mean by the "transcendence" of the Idea no more than that it is asserted to be other than the objects of sense, and differently apprehended, then transcendence is taught in the *Phædo* and *Republic*, but it is equally taught, and on precisely the same grounds, in the *Timæus*. And if you mean anything more than this, it is not taught anywhere in Plato. In the *Phædo*, for instance, the Idea is "present" in an unexplained way to the sensible

[1] See MIND, N.S., Nos. 19, 20, 21. Subsequent study of the dialogues, and more especially the perusal of M. Milhaud's *Les Philosophes-geomètres de la Grèce*, has satisfied me that, while the general character of the interpretation there advocated is correct, insufficient attention was given to the mathematical bearings of the dialogue.

particular, and is the cause by its "presence" of the qualities of the particular. In the *Republic*, where the supreme Idea is said to be even beyond truth and existence, as Mr. Benn reminds us, it is also said, as he does *not* remind us, that the sun in the visible world is the "offspring" of the "Good" "begotten in its own image," and the whole point of the immediately following metaphor of the divided line is to insist on the thorough-going connexion, continuity, and analogy of existence and experience, from the lowest to the highest levels.[1] It is surely an entire misreading of Plato's words when he is taken to mean only that the world of Ideas is *not* the world of things, or that perception is *not* knowledge. The positive connexion is at least as real in his view as the unlikeness. It is not in Plato that we can find any countenance for the Indian notion that the things of sense are a mere illusory show. Our first step to a true insight into his meaning must be to set on one side this false and misleading antithesis of the immanent and the transcendent, which seems to make as much havoc of some recent Platonic exegesis as it does of metaphysics, if allowed to get a foothold there.

Let me take a simple illustration which, besides exhibiting the worthlessness of this false antithesis, is adapted to lead us straight to the heart of Plato's thinking. It is a commonplace, or ought to be so, that the curves studied by the geometer are not as such accessible to sense-perception. The difficulty is not the merely mechanical one that you cannot actually draw a circle with all its radii exactly equal, a line of absolutely uniform direction, etc.[2] If this were all the case of the geometer would not have all the interest which Plato rightly attributed to it for the general theory of science. For it may be said, though on measurement the radii of my circle might be found to be only approximately equal, and though their inequality might even be made directly apparent to the sense of sight by a magnifying glass, yet geometry deals with the forms of the visual world as they are directly presented in the visual perception, and hence, so long as the radii of my circle are visibly equal, the circle as seen is a true geometrical circle; the circle as measured or as seen after magnification is in strictness not the same object, and therefore as a student of geometry I am not concerned with it.[3] The real problem

[1] *Phædo*, 100 *d*. Rep. 509 ff.

[2] Though, of course, this difficulty among others is one of the problems which suggested to Plato the Ideal theory (*Phædo*, 74).

[3] This, I suppose, would be in principle the Kantian view of the nature of geometrical science.

goes much deeper, and it is this. What I study when, *e.g.*, I investigate the properties of the circle from its Cartesian equation is a universal type of relation between positions; what I should see, even assuming an impossible accuracy of construction, would always be only a *special case* of this relation. Thus any circle, however accurately drawn, has its own special degree of curvature, according to the length of its radius, or to take a still more striking example, any actual case of a "central conic" must be either ellipse or hyperbola, but the general central conic, of which I may find the equation and investigate the properties, is at once, and as you please to call it, both and neither. And so generally, the object of geometrical study is at once a thing which has no meaning except as a rule for the determination of visual extension, and is also as such incapable of being given in a visual perception. If we were asked, in the language of the bad old antithesis, "Is the central conic transcendent or immanent?" there would be no answer, short of the reply, "Both and neither". It may be called immanent, in the sense that it has no actuality except as realised by the construction of a visible outline of which it determines the type; it must be called transcendent, in the sense that you can never even as a pure "form of intuition" perceive it in its true generality.

I said just now that this example takes us into the heart of Plato's thought about the Ideas. Too little attention has sometimes been paid to the various examples of the Ideal existences which are given in the various dialogues. Plato's meaning has been supposed to be adequately indicated by such half-jocular instances as that of the Idea of a bed or table in *Republic*, 10. If however we set ourselves to penetrate Plato's meaning by attending to the instances of the Ideas which occur where the conversation is assumed to be between trained members of the philosophic schools, we shall find that he does not allow himself to depend upon popular illustrations of this kind. In the *Phædo*,[1] for instance, the

[1] *Phædo*, p. 74, *αὐτὸ τὸ ἴσον*; p. 75, *τὸ καλόν, τὸ ἀγαθόν, τὸ δίκαιον*; *τὸ ὅσιον* as examples of Ideas; p. 100, *τὸ καλόν, τὸ ἀγαθόν, τὸ μέγα*; p. 101 ff., *μέγεθος, πλῆθος, σμικρότης, μόνας, δύας*; p. 104, *ἡ τῶν τριῶν ἰδέα* and *ἡ ἰδέα τοῦ ἀρτίου* (the argument also seems to imply at pp. 104-5 that *θερμόν* an *ψυχρόν* are ideas); p. 106, *αὐτὸ τὸ τῆς ζωῆς εἶδος*.

In estimating the value of the references to ideas of bed, table, etc., in the *Republic* we must bear in mind that none of the interlocutors there are philosophic companions of Socrates, hence the comparative avoidance of technical terms of the school, and the use of "popular" illustrations. Socrates adopts a different tone when he is talking with philosophers like Simmias and Cebes. The example of the *εἶδος* of the shuttle in *Cratylus* 389 *b-d* is instructive as showing, on reflexion, why *σκευαστὰ* are said, in

Ideas which are cited fall into two main classes; there are (1) first and foremost, Ideas of mathematical properties and relations, equality, magnitude, multitude, paucity, and (2) of moral and æsthetic qualities, the just, the beautiful. The mention of an Idea of Life may perhaps be taken to show that the series of organic types was also already recognised as belonging to the system of Ideas. And it is instructive to observe that it is from a mathematical relation, that of equality, that the whole discussion starts. Similarly in the *Parmenides*, when Parmenides questions Socrates as to the contents of his assumed Ideal world, it is our moral and mathematical ideals, which form a body of standards or norms to which experience only imperfectly approximates, that are chosen as the most certain and obvious instances of Ideal existences. Then follow organic types, the Idea of man, etc., and in the third place, and more doubtfully, other things possessed of common qualities and called by a common name. If I had space here to write out the results of an experiment I once performed of noting down very carefully the examples of Ideas given in the more important dialogues, the list would, I believe, of itself prove that, except where the theory has to be made intelligible to persons who are assumed to stand outside the strict philosophic curriculum of Plato's school, all the cases which occur are those either of (1) mathematical, moral, and æsthetic "norms," or (2) of organic types and the organs and elements which enter into their composition. And both these classes can be ultimately reduced to one common type, that of mathematical relation. For it is, on the one hand, in order and proportion that Plato sees the fundamental character both of moral goodness and of æsthetic beauty, and on the other, every organic type is for him determined by a special quantitative relation between constituent elements, which in their turn are themselves constituted by mathematical laws out of the primary triangles.[1] Thus in the end we seem justified in concluding, with M. Milhaud in his most instruc-

some dialogues, to have corresponding Ideas. It is because the purpose for which the implement is fashioned demands a certain mathematical proportion between its various parts, and it is this proportion which is the εἶδος of "bed" or "shuttle". For proof of this I must refer to the body of the present paper. I see no adequate ground for attributing to Plato himself the Academic view often referred to by Aristotle that there are no Ideas of σκευαστά. If the ὁπόσα φύσει, to which according to Aristotle Plato confined the Ideas, may include the triangle (which does not exist till you draw it), why not the bed or the shuttle?

[1] See *Philebus*, 51 *d* ff. (beauty), 64 *c* ff. (goodness), 31 *c* ff. (animal organism).

tive and original work, *Les Philosophes-geomètres de la Grèce*, that the metaphysical problem suggested by the existence of the mathematical concept is the very basis of Plato's whole theory.[1] I venture to think that this would have been recognised long ago but for the assumption that Aristotle cannot have omitted anything in his account of the influences under which Plato's thought took shape. Yet what more likely than that Aristotle, whose own mathematical attainments are shown by numerous passages in his writings to have been, to say the least, common-place, should have failed to do full justice to the particular element in his master's thought which he was personally least fitted to understand?

If the foregoing argument be accepted, as I think it must be, it will follow that Plato conceived the relation between an Idea and the corresponding sensible particular to be in principle the same as that between what we should now call the general equation to a curve and such a special instance of the curve in question as can be got by giving a numerical value to the coefficients of the equation and proceeding to trace the line thus determined. And we may at once draw a consequence which will account for many of the peculiar difficulties which Aristotle and every later critic have found in the Ideal theory. Plato, like Spinoza after him,[2] unconsciously evaded the worst difficulties of his doctrine by taking as the typical case of the relation of universal and particular a case in which the particular is no more a concrete physical thing than the universal itself. Hence, among other things, the insoluble puzzle of the relation of his Ideas to causality. In the realm of mathematical truth, in which the whole theory originated, causality has no place; but the moment you transfer your attention to the problems of the physical world the question at once arises, Do the Ideas, or do they not, determine the corresponding particulars into existence? If you say Yes, there is the difficulty acutely formulated by Aristotle, How is it then that *e.g.* a particular horse cannot come into existence without the copulation of a pair of pre-existing horses, and again how can artificial products, of which there is not, according to the view which

[1] See especially *op. cit.*, bk. 2, ch. v., to my own mind far the most original and important of recent contributions to the study of Plato. I shall draw exceedingly freely in what follows upon the learned author's results.

[2] See *Ethics*, ii., 7, *schol.*, where Spinoza without the least misgiving takes as his illustration of the identity of a mode of extension and the idea of that mode the case of the "circle existing in nature" and the idea of the circle in the mind of God.

was current in the Academy in Aristotle's time, supposed to be an Idea, come into existence at all? If you say, No, and fall back, as Plato himself usually does, on the thought that the Idea is a formal, or as the Neo-Platonists said, a paradeigmatic cause, but the agency of Soul the efficient cause of all changes, the question at once arises, how your two ultimate principles, Ideas and Soul, are to be co-ordinated. (A problem, be it observed, which is simply ignored when it is coolly taken for granted without inquiry that the "Demiurge" of the *Timæus* is "purely allegorical".)

I may perhaps be allowed in passing to observe as an act of justice to an often unintelligently decried school of thinkers that it is precisely the absence of a clear answer to this all-important question in Plato's own thought which led to the so-called "trinity" of Plotinus and the still more elaborate triadic constructions of Proclus. Whatever else we may think of these doctrines they manifestly represent a legitimate attempt to bring Plato's two principles, "the Good," or supreme Idea, and the Soul, into some intelligible relation with one another, and the Neo-Platonists may therefore, as to the central doctrine of their system, fairly claim to be true continuers of the Master's work.

To return for a moment to the Platonic theory as outlined in the *Phædo*. It should be apparent that the dialogue suggests the ancient problem of the One and the Many in what at first might seem two distinct forms. We may ask (1) how the one Idea can be equally present to an indefinite multiplicity of things without losing its unity, and (2) whether the problem of the One and the Many will not break out again within the Idea's own nature. It is the great achievement of the first part of the *Parmenides* that it shows these two questions to be really one, and indicates that the true way to deal with (1) is by finding the answer to (2). That answer itself might be discovered, as I think I myself among others have previously shown, in the "hypotheses" of our dialogue, but is still more directly contained in the *Philebus* and *Timæus*.

We may now attack the portion of the *Parmenides* with which my paper announced its intention of dealing. And in doing so we shall be greatly assisted by turning at the various stages of the argument to those mathematical illustrations which are never far from Plato's thought and never long absent from his language. What obscurity there is in the reasoning of Parmenides is in the main, I think, due to our reluctance to "clothe his principles in facts" by con-

stantly recurring to definite examples of the class of scientific problems upon which the whole Platonic theory is demonstrably based. If we will only take this trouble, the purport of the dialogue at once becomes positively perspicuous. Let us begin then by assigning a precise meaning to the *aporia* of Zeno with which the discussion starts. As briefly summarised by Plato, Zeno's argument runs thus; things cannot be a Many, for, if they are they will be both similar and dissimilar, and this is absurd (127 *e*). To realise the probable meaning of this we need to remind ourselves that the polemic of Zeno was directed against the Pythagorean view of the composition of geometrical figures out of points, and that its special object was to establish indirectly the continuity of extension. Probably then we ought to interpret the antinomy in some such way as this. If figured extension is made up of points having magnitude as is held by the Pythagoreans, (*a*) all lines will be straight, and there will be no qualitatively dissimilar curves. For, if the straight line itself is made up of these points, of course the "point" itself will also be a *straight* line of unit length, and what we commonly call curves of various kinds and orders must therefore be, not approximately but in reality, so many open or closed rectilinear polygons. (*b*) But again, since lines are made up of points, which are really unit lines, it will also be open to us to argue that there must be as many different kinds of unit lines as there are kinds of curves; there will have to be not only one unit for the circle and another for the ellipse, but, since the curvature of one circle or the eccentricity of one ellipse is not the same as that of another, there must be a different unit for each circle and for each ellipse; thus "if things are a Many," they must be at once composed of repetitions of one and the same identical element and of as many qualitatively unique elements as there are "things" in the Many. Thus they are at once "like and unlike". And, I may add, there is a grave objection to taking what at first might seem the simplest way out of the difficulty by adopting the second of these alternatives. That, so long as you regard the line as actually made up of a sum of points having magnitude, you cannot meet the difficulty by regarding the unit of each kind of line as unique is proved by the fact that a curve and a straight line may coincide at one or more points (they may cut or touch). Hence until we find some other explanation of the relation of the line to the points which, to use modern terminology, satisfy its equation, than that which treats the points as constituent parts of the line, Zeno's antinomy is insoluble. It is on the

problem just raised, how to conceive of the Idea without making it a constituent part of the thing to which it is present, that the whole of the following argumentation turns. The polemic of Parmenides in the dialogue aims in fact at one simple result, *viz.*, the proof that the Idea must not be conceived as a constituent part of the sensible thing of the same common name. This has been in my judgment so conclusively shown by M. Milhaud in his already quoted work (bk. ii., ch. v.), that I should have thought it superfluous to publish the present paper, were it not that his admirable remarks on the text of our particular dialogue seemed capable of being reinforced by a more detailed examination of the actual words of the text than was suitable for a work dealing with the Platonic philosophy in its whole extent.

On the speech with which Socrates follows up his recapitulation of the argument of Zeno it is not necessary to dwell at length. Two points in it we may just take note of in passing. One is that the passage 129 *d-e* aims at indicating that the problem of Idea and thing is only a corollary of the more fundamental problem of the double character of the Idea itself, as at once One and Many, or, to use another Platonic name for it, the problem of the intercommunion of the Ideas. Hence the inclusion of rest and motion among the "separate and self-existing forms" of this passage ought of itself to warn us against any interpretation of Plato which sets up a difference between the Ideas canvassed in the first part of the *Parmenides* and the categories of the *Sophistes*. The other is that with this speech of Socrates the geometrical problem in Plato's mind takes on a slightly different form. The question, What is the relation between the circle as defined by its equation and the various circles obtained by giving a series of numerical values to the coefficients? to avail ourselves once more of the convenient modern way of putting a perennial problem, passes into the root-question, What is the *meaning* of speaking of the circle or other curve as a *locus*, or as constituted by an equation? (This seems to me one of the simplest illustrations I can devise of Plato's meaning when he says we have to ask how the Idea itself can be both one and many, and I recommend the study of it to any one who is tempted to think that showing an Idea to be at once one and many amounts to proving it "a nonsensical conception".)

The argumentation of Parmenides himself begins at page 131 *a* with a dilemma. It is assumed that, if the Idea is inherent in the thing, it must be present to it either as a

whole or only in part. Then in the first case the Idea loses its unity by multiplication, and there is a distinct Idea inherent in each particular belonging to the given class; in the second, it loses its unity by indefinite subdivision, and the impossible consequences of this supposition are followed out at somewhat greater length. It will be worth our while to illustrate both sides of this new antinomy by reference to the same body of mathematical conceptions with which we have all along been dealing. The first of the alternatives suggested by Parmenides would be realised if *e.g.*, every accurately drawn geometrical circle were in every respect an exact facsimile of every other, just as every correctly struck exemplar of the same coin would be of every other coin struck with equal accuracy from the same die. This would be the case if in the general equation of the curve the coefficients and the independent term had fixed numerical values, so that the only remaining difference between two circles, two parabolas, etc., would be that of position of the origin of co-ordinates, as determined in turn by reference to some standard system of axes. On these terms and on no others would it be possible for the "Idea" of the curve, *i.e.*, the relation expressed by the general equation, to be entirely exhausted in the single exemplar.

This way of regarding the relation of the curve to its "equation," it should be observed, would naturally follow from the Eleatic view of the extended as a *mere* continuum. For the moment you try to explain how *e.g.* two circles can be equally circles and yet have different curvature, you are driven to fall back upon the conception of the circle as a form of relation between a plurality of elements of some kind or another, and thus to admit the discontinuity, in some sense yet to be determined, of the extended. Whether you regard these elements in Pythagorean fashion as constituent "parts" or not makes no difference to this result. The second alternative again apparently corresponds to what we know to have been the Pythagorean view of the nature of extension; the "Idea" is now supposed to be itself composed of an indefinite plurality of parts which are outside one another. Thus the circle, for instance, is taken as being simply formed by the repetition of an indivisible unit line or Pythagorean point, and it will follow that, as any one actually perceived circle only contains a limited number of these units, part of the "Idea" will constitute this particular curve, and another part, *i.e.*, other similar units, some other curve of the same kind. Such at least was the Pythagorean view of the straight line, and it is reasonable to suppose that other lines

were regarded in the same way. Hence the effect of the demonstration that neither view is tenable is to show the necessity of a third doctrine which permits of justice being done at once to the aspect of continuity and to that of discreteness in extension.

We may shortly see reason to hold that Plato's view, which is to be at once non-Eleatic and non-Pythagorean, depends upon the recognition of the difference between perceptual and conceptual extension. We must, however, first proceed with our examination of the actual words of the dialogue. To the general argument against the divisibility of the Idea Parmenides goes on to append a statement of certain absurd consequences which will follow if we still persist in upholding the Pythagorean view. The nature of these absurdities has not, I think, always been perceived, certainly I myself in my previous articles on the dialogue entirely failed to throw light upon them. From the standpoint we have now reached however they do not seem to present any special difficulty. The first of them, as formulated by Parmenides, reads thus (131 *c-d*): "if you make magnitude itself consist of parts, and say that each of the many *magna* is *magnum* in virtue of a portion of magnitude less than magnitude itself, will not the consequence appear absurd?" If we remember that the term μέγεθος regularly occurs in Greek philosophical language as the special name for a *geometrical* magnitude, a quantum of extension, it will not be difficult to seize the speaker's thought.[1] We may expand the reasoning in some such way as this: if the Pythagorean view of the unit of extension is sound, then any finite magnitude, a straight line for example, is a quantum precisely because it contains so many repetitions of the unit of quantity, the point, which latter is on this view αὐτὸ τὸ μέγεθος; but the unit itself is also a quantum, and by parity of reasoning must therefore be itself composed of still minuter units "of a higher order," and thus in the last resort every quantum will be composed of quanta less than the supposed ultimate unit itself. Very possibly it may have been the discovery of incommensurables (the significance of which for the history of Greek metaphysics has been so powerfully exhibited by M. Milhaud) which led to the formulation of this particular difficulty, though of course it is really involved in the construction of *any* extended quantum out of indivisible units.

[1] See for instances of this use of the word Bonitz's *Index Aristotelian, sub. voc.*, and compare particularly the definition at *Metaphysics* Δ 10, 20 *a*, 9. πλῆθος μὲν οὖν ποσόν τι ἐὰν ἀριθμητὸν ᾖ, μέγεθος δ' ἐὰν μετρητὸν ᾖ κτλ.

For suppose we have realised the incommensurability of the "side and diagonal," and wish to reconcile our discovery with the Pythagorean view of extension. We can only do so by assuming that side and diagonal are respectively multiples of mutually incommensurable unit lines. Thus if the side of the square consists say of n unit lines each equal to x, the diagonal must consist of n units each equal to $x\sqrt{2}$; then comparing the side-unit with the diagonal-unit, the latter exceeds the former by a quantity *viz.* $x(\sqrt{2}-1)$, which we shall have to regard as composed of still minuter units incommensurable with x, or, as Parmenides is made to say, "by a part of magnitude less than magnitude itself".

The same set of ideas underlie his next paradox; "Can one quantity be equal to another by something less than equality itself?" On the Pythagorean theory the equality of two lines would be due to the fact that each contained the same number of units. Each side of the square is equal to each of the rest because each contains n times the unit line. But, we may understand the opponent to rejoin, it is tactily assumed that not only the number of units in each side but also the individual units themselves are equal, otherwise the resulting lines will be unequal. And on Pythagorean principles the equality of the units can mean nothing but that they in turn are composed of an equal number of more ultimate units, and this is inconsistent with their supposed indivisible character.

The last of Parmenides' supplementary arguments against the Pythagorean position is harder to understand, and this is perhaps why certain persons of whom Proclus speaks wished to reject the passage (131 *d-e*) as spurious, though it is not easy to see why, if not genuine, it should have been inserted. I venture with some diffidence to suggest the following as approximately representing Plato's meaning in this obscure sentence. On the Pythagorean view the point or unit is of course a *minimum* of extension and may thus fairly be taken to be signified by the expression "the small itself": But the point, as we have already seen, is itself, for the Pythagoreans, a quantum, and it therefore contains parts, each of which is, in Plato's words, "smaller than the small itself". Now suppose you add one of these parts to one of two equal magnitudes, what will happen? The magnitude so augmented will not become larger than the other, for it can *ex hypothesi* only be larger if it contains a greater number of *units;* it will not remain equal, for equality means composition out of the same number of equal *units;* thus nothing

remains but to say it must have been made less by the addition. In fact a quantity less than the unit, if there were such an indivisible minimum as the unit, would be, as we should now say, a negative quantity; to add it to anything is to subtract from the thing. In other words, there can be no such thing as an absolute minimum of quantity which is not zero. If understood in this way, the argument together with its predecessors forms just such an antinomy as that by which the historical Zeno contended that, on the Pythagorean view, every magnitude must be either infinity or zero. This would agree well with our suggestion that one half of Plato's general argument is directed against Eleatic and the other against Pythagorean theories of the extension studied by the geometer.

We now see why Parmenides proceeds straight from the considerations we have dealt with to the "third man" objection to the Ideas (132 *a* ff.). For that objection simply states in a general form the principle of the Pythagorean error already exposed. In each of the three puzzles just exhibited the source of our difficulties was that by treating extension as made up of indivisible units we were driven to assume an infinite number of successively diminishing orders of these units. Thus our Idea turned out to be "not one but indefinitely numerous". The passage in which this famous crux is brought forward then does not raise a new difficulty, but simply puts the old one in an abstract form. Hence if we wish to know what was Plato's answer to the "third man" argument, which Aristotle seems to have thought so irrefutable, we must find out his conception of the relation between the geometrical curve as defined by its characteristic property and the directly perceived curve accessible to sense. Or, what is the same thing, we must discover the theory of extension by which he hoped to escape at once from the Eleatic and from the Pythagorean side of the dilemma which arises when only one extension, the purely perceptual, is admitted, and it is then asked whether this perceptual extension is continuous or discrete.

On the "third man" difficulty itself I do not propose to add any observations. The method by which Socrates proposes to evade the difficulty will, however, repay a brief examination. He suggests, and some rash readers have held that Plato did wrong in rejecting the suggested solution, that the Idea is merely a concept in the mind (132 *b*). At first sight this no doubt seems a good answer to the question how it can be at once one and many, for common-sense finds

no difficulty in admitting that the same predicate can be thought or uttered about any number of different things. In fact the proposed version of the doctrine would bring it very near to Aristotle's view of the requisites of predication; the Idea would become a ἓν κατὰ πολλῶν instead of a ἓν παρὰ τὰ πολλά. Only, as Parmenides is careful to point out and Aristotle not always anxious to remember, we should have escaped from our difficulty by ignoring it. For the unity of the concept is not psychological but logical; it is one concept because it has a single reference or meaning not because it is in some unexplained way "one mental state," whatever such a phrase might mean. In Plato's language, the one concept is one in virtue of having one object which is conceived through it; thus we are brought face to face with the problem, so often neglected by the popular philosophy of all ages, of the relation between truth and reality. The concept, to be valid at all, must have a reference to something which falls outside its own existence as psychical fact, and this something must in some sense be a unity, so that the problem of the Platonic Idea is still with us. The passage of our dialogue is only one of many which show that Plato was aware to an extent to which few philosophers have been so of the impossibility of that "cheap and easy monism" which takes it for granted that logic and reality, truth and immediate fact, can be simply identified without further ado. That an interpretation which would make the unity of a concept lie in its mere existence as a psychical fact should have found favour with modern interpreters of Plato, under the form of an identification of the Ideas with the thoughts of God for instance, is simply not creditable to their own logic. The conclusion of the passage, with its dilemma that if the Idea is a mere concept either all things think or there are unthought thoughts, points out the inevitable consequence which arises from the initial mistake of identifying reality with mere psychical existence as such. It does not, of course, in any way exclude the view that existence as a psychical event is an inseparable aspect of all reality. It is valid against all forms of the doctrine that reality is a mere collection of "states of consciousness," but must not be confused with the vulgar "realist" view that there is existence which has no aspect of psychical fact at all.

Of the connexion of the argument just examined with the following investigation of the hypothesis that the Idea is a sort of transcendent type which the particular "imitates" I have spoken at length in my previous articles on the *Parmenides*, and I have nothing in principle to add to the proof

I there gave that the theory of "imitation" is not put forward as Plato's own solution of the difficulties he has raised about "participation". Here we may be content simply to remark that this interpretation is excluded by two very simple considerations; the new formula is shown to lead to the very result which was fatal to the old, the "third man" and the indefinite regress (132 *d*-133 *a*); also it is found to involve agnosticism pure and simple. For it amounts to declaring the absolute severance of Idea and thing. To recur to our mathematical example, the circle as studied by the geometer and the circle you can see are now placed in two distinct worlds, and we have just seen that we cannot bring them into relation by calling the one "like" the other without falling into the indefinite regress. Hence all the various properties of the curve of the geometer will belong solely to it and have nothing to do with the seen curve. For instance, suppose we deduce from the equation of the curve the equation of its tangent; the result will hold good only for the geometer's circle, and will have nothing at all to do with relations between the seen circle and the seen tangent. And therefore it will be no longer possible for us to hold, as Plato had done in the *Phædo*, that the seen curve and tangent of a diagram "suggest" the relation between the conceptual curve and the conceptual tangent; with the destruction of all bridges between the seen and the conceptual now effected, it becomes impossible to understand how mathematical studies should ever have arisen. In short we have been brought to the same *impasse* to which Mill conducts us when he first declares that the lines, circles and points of the mathematician are copies of those which he has seen in the course of sense-perception, and then runs away from the consequences of his assertion by going on to say that no one has ever seen anything corresponding to the curves of mathematics and therefore the conclusions of the science are not really true. Hence we can see why Plato still maintains that unless we can find a way out of our difficulties consistent with maintaining the existence of Ideas, all science is impossible.[1]

The result we have reached is in fact this. The science of quantity, and for Plato all real science is quantitative science,

[1] The same difficulty arises, in a slightly different form, by such a view of the relation between concepts and percepts as is maintained in Prof. Karl Pearson's *Grammar of Science*. The reader has constantly to ask himself, "if the perceptual and the conceptual are so absolutely disparate, how comes it that the results of our conceptual science can be applied to the course of the perceptual order?" The learned Professor himself seems inclined to sit down here with a "final inexplicability".

the discernment of infinite numerical relations in the manifold, is a mere delusion if either of the two great conflicting views, that extension is a mere continuum or that it is a mere aggregate of purely discrete units be accepted. Neither Eleaticism nor Pythagoreanism provides us with a satisfactory theory of the relation between the curve as a continuous and single qualitative datum and the numerical infinity of discrete positions which can be taken upon it. Eleaticism, by affirming continuity pure and simple, had burked the problem; Pythagoreanism, by attempting to treat the positions as themselves extended and as constituent parts of the curve, had fallen into the absurdities of the indefinite regress. And the source of error has been the same in both cases. The thing and the Idea have been treated as if they were both existences of the same order, as if each in fact was a thing in the sensible world. The reason why the earlier philosophies made this mistake again is that they failed to distinguish conceptual from perceptual extension.

The real problem before Plato is therefore to provide for this distinction, and it has been elaborately shown by M. Milhaud that it is here that the theory of "ideal numbers" comes in. The general lines of the solution can indeed be divined from the hypotheses of the latter part of the *Parmenides* itself. We can there see that Plato is affording us hints of a view according to which the Idea is at once one, that is to say a unique form of qualitative existence, and many, that is dependent in some way upon a quantitative law of the inter-relation of the indefinitely manifold. The full understanding of his view has however, as is well known, to be sought in the *Philebus* and *Timæus*, as read in the light of what Aristotle has to say about the ideal numbers. Thanks to the insight of M. Milhaud the meaning of these ideal numbers can be said to be no longer doubtful. The ideal number is a quantitative law by which a unique quality is determined. And, as its character of a number shows, the relations in question are those between positions in space, and the unique qualities are qualities of extension as actually perceived by the senses.[1] The ideal number is, in fact, precisely what we know now as the equation to a curve or surface. Two points in connexion with it are specially noteworthy. The first is that the numbers, unlike those of arithmetic, are incapable of addition to one another. This is because the numerical formulæ are rules for the constitution

[1] I do not mean that nothing but what is spatial can be counted, but that Plato pretty certainly held that it is so.

of distinct qualitative existences. One such formula will define a circle and another an ellipse, but you cannot add the equation of the circle to that of the ellipse as you can add numbers in arithmetic, in order to obtain a third equation as their sum. The second point is that these numbers, unlike those of the Pythagoreans, are not composed of sensible units. This means that Plato, probably for the first time in the history of thought, distinguished between perceptual and conceptual extension. And it is important to observe that the character of numerical multiplicity belongs to the extended in its conceptual, the character of qualitative uniqueness in its perceptual aspect. As perceived by sight the circle, for instance, is a continuous line with a peculiar qualitative structure of its own, unlike that of any other curve than a circular one, and to a less degree unlike that of another circle with a greater or less degree of curvature. It does not, as a perceived figure consist of or contain points, as the Pythagoreans had thought. It is only when by an act of thought we analyse its construction, and find that it may be mentally represented as the line upon which any position satisfying a certain quantitative relation will be situated, that its aspect of numerical multiplicity becomes apparent. This consideration may perhaps throw light upon the language used in the *Timæus* (52 *b*), according to which the space which is the universal unchanging receptacle of generation cannot be perceived by sense, but must be apprehended by a sort of "bastard reasoning". For the space of which Plato is there speaking is not extension as perceived at all; perceptual extension with its content of infinitely various qualities and shapes corresponds to the visible world of changing existence itself, not to its mysterious substrate. By the substrate is meant that indeterminate something which is variously specially determined in its various parts by the different numerical relations or equations upon which the multitude of qualitatively different curves and figures depend, *i.e.*, space, conceived simply as an indefinite plurality of homogeneous quality-less positions. If I am able, in a subsequent article, to examine some of the problems raised by Mr. Benn's treatment of the *Timæus*, I shall hope to show that failure to realise that Plato's "third form" in that dialogue is conceptual, as distinguished from perceptual, space, has been responsible for some at least of the difficulties which interpreters have found in the doctrine.

For Plato then, if we are right in our main contention, the whole of the world of quality belongs as such to the sphere of the sensible; it is only of quantitative relations

that there is any true science, and thus it is by no unfortunate leaning to Pythagorean symbolism but as a necessary logical consequence of his central doctrine that he finally identified the Ideas with the principles of number. How completely he did so can easily be seen from his writings if the mathematical physics of the *Timæus* be studied side by side with the treatment of proportion and symmetry as the essence of goodness and beauty in the *Philebus*. From our own modern point of view this identification of science with the study of quantity is hardly likely to be judged satisfactory; on the contrary, many circumstances, especially the growth of psychology into a great independent scientific discipline, have led to a growing conviction that there are, or may be, branches of scientific knowledge which are non-quantitative, but the quantitative ideal in science still retains sufficient attractiveness for many minds to enable us to realise how much it meant to the philosopher who formally prescribed the study of geometry as the one propædeutic to philosophy.

But what then in the end, it may be asked, is on this interpretation the answer to the question with which we started, the problem of the relation of Idea to thing? Simply this; the Idea as such is not of the same order as the sensible thing, but is connected with it in a peculiar way which can only be understood by bearing in mind its character as an ideal *number*. The Idea of the circle, or as we should now say, the circle as defined by its equation in the general form, is not itself properly speaking a curve, that is, is not a unique qualitative form of perceptual extension; it is a general rule for the construction of curves of a certain kind by the mental synthesis of positions fulfilling a certain relation, and these positions themselves have no existence as parts of perceptual actuality; they do not exist in the perceived circle, but are derived from it by a conceptual analysis. Precisely the same is true of the equation to a particular circle which is got by giving the coefficients of the general equation numerical values. Such an equation, like the ideal number, is at once many, as synthesising an indefinite plurality of positions, and one, as synthesising them in accord with a definite law. Let the circle corresponding to such an equation be actually described from any point as centre, and in its unique quality as perceived you have the particular which according to Plato's phrase is what it is in virtue of the "presence" of the Idea. This language about "presence" and "participation" and "likeness" is indeed Plato's way of saying that the qualitatively unique character of the perceived curve, when you come mentally to analyse it, may be replaced by and

considered equivalent to the constitutive relation between points of conceptual space.[1]

Such appears to be, in its broad outlines, the theory for which the criticism of the *Parmenides* prepares the ground. If our reading of it has been on the whole correct, we may venture to make two assertions: (1) there is no disagreement between the *Parmenides* and the later dialogues generally and the doctrines familiar from the *Phædo* and *Republic*, the theory of the "ideal numbers" being a natural development from principles inherent in all Plato's speculation; (2) failure to perceive the agreement of the *Parmenides* with the *Phædo* and *Republic*, or willingness to suspect its genuineness, may fairly be taken as evidence of thorough-going misapprehension of Plato's whole philosophy.[2]

[1] When you come to consider the case of a concrete physical *thing* of *e.g.* circular form, you further find that it is not even an *exact* embodiment of the circle with numerically definite coefficients; its circularity is only approximate. This perhaps throws some light on the position assigned by Plato to τὰ μαθηματικά as intermediate between the Idea, in its universality, and the sensible thing.

[2] *P.S.*—I should like to take this opportunity of modifying the suggestion made in the last of my former articles (MIND, N.S., 21) as to the comparatively early date of the *Parmenides*. I am now satisfied that my supposition of a depreciatory reference to the dialogue in the *Philebus* was mistaken, and that the inference based upon it therefore falls to the ground. As regards the general question of date of composition of the dialogues it is necessary to avoid inferring that a dialogue in which a subject is discussed at length must be earlier than one in which the same results are briefly summarised. No one now doubts that the *Sophistes* is a later work than the *Republic*, though the view of negation elaborately established in the former is taken for granted in the latter (Rep. v., 478 D). Stylistic evidence—which is the only trustworthy basis for inference—surely suggests for the *Parmenides* however a position nearer to the *Phædo* and *Republic* than to the *Sophistes* or *Philebus*.

II.—A COMPENDIOUS CLASSIFICATION OF THE SCIENCES.

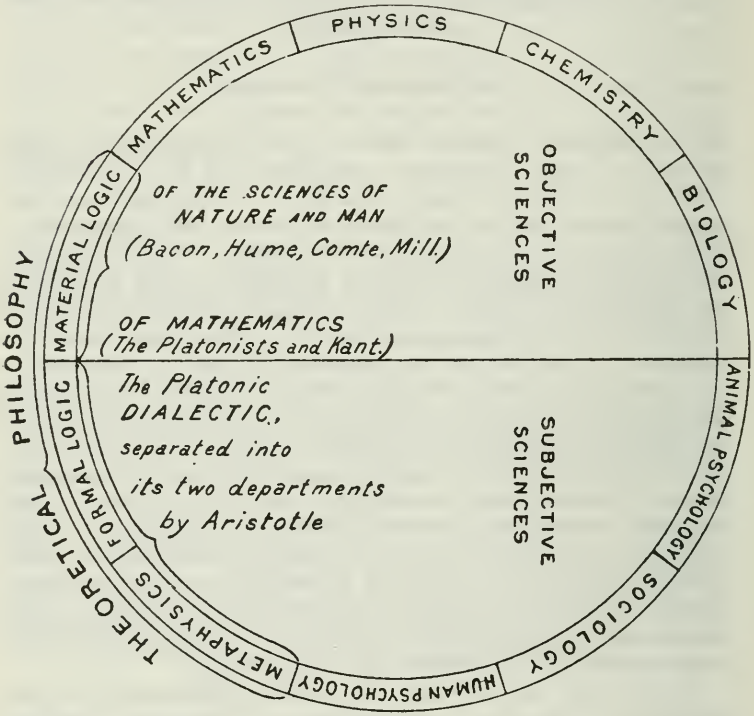
By Thomas Whittaker.

It is generally allowed that in his Classification of the Sciences Comte furnished a valuable clue to a systematic order in the objective study of nature. Metaphysicians and psychologists find his scheme at fault in its imperfect recognition of the place of subjective studies. Still, it may be noted that he himself, in his later speculations, did something to remedy this defect. After Sociology, which he at first regarded as the supreme science, he placed a Science of Morality. Further, in his *Synthèse Subjective*, he began to set forth a statement of fundamental principles underlying all the positive sciences; and, beyond them all, a view of the cosmos as animated and as related to ends. This indeed was put forward as poetry or religion, and not as demonstrated truth; but it is plainly an approximation to a more "metaphysical" view than that which he had hitherto taken. What I propose is to carry out this completion systematically, with due recognition of the validity of subjective principles which Comte himself would have repudiated, but which, as is acknowledged equally by the successors of Kant and of Mill, are indispensable for a full account of knowledge.

In Comte's final scheme the positive sciences follow one another in the order:—Mathematics, Astronomy, Physics, Chemistry, Biology, Sociology, Morality. This list itself, to begin with, needs correction. Astronomy, as Mr. Spencer has shown to the satisfaction even of some adherents of Comte, does not properly belong to the series of fundamental or abstract sciences as he conceived them. It is a concrete science in the sense in which Geology is a concrete science. Under Biology, Comte himself made a special division for Cerebral Physiology; this being his equivalent for Psychology. When Psychology is recognised by name, it is clearly entitled to a separate place. Lastly, it may be observed that

Comte's Moral Science is not philosophical ethics, but is the science of the individual human mind viewed as posterior to life in society. Thus it is really a higher Psychology; namely, that of man as possessing the attributes which distinguish him from brutes.

When from the correction of the list we proceed to its completion, we find that before Mathematics must come Logic (Formal and Material) viewed as a philosophical



science. After the higher branch of Psychology comes Metaphysics (as Theory of Knowledge and as Ontology). We are now presented with the result that, to figure the amended classification, Comte's linear series, provisionally conceived as in a straight line, must be bent into a circle. For a series beginning with Formal Logic and ending with Metaphysics is subjective at both extremes. Moreover, in the speculative though not in the didactic order, Metaphysics as Theory of Knowledge precedes Logic. This is represented

in the above diagram. The additional points there figured will be explained in the sequel.

The problem now before us is to show how the determinations of this series are consequent one on another. Beginning with Formal Logic, we may simply posit, as first principles of the science, the Laws of Thought, which, though disclosed by metaphysical investigation, can be stated with perfect intelligibility to those who have not gone through the dialectical process that establishes them. For scientific purposes, it is sufficient that they should be found to be applicable tests of formally valid thought. Nor is the metaphysical problem ever raised by their breaking down. It arises from the theoretical need felt of completing the circle. The circle becomes formally complete when the Theory of Knowledge restores to us with confirmation the principles on which we have hitherto implicitly or explicitly proceeded. Historically, it may be noted, Aristotle arrived at the Laws of Contradiction and of Excluded Middle in his *Metaphysics*.

These and the Law of Identity I hold to be laws of thought, not of things. To take specially the Law of Contradiction, which, according to Aristotle's exact way of putting it, asserts that A cannot be not-A at the same time and in the same relation. The law tells us that thought, if it would be formally valid, must not contradict itself; but it does not enable us to assert a single materially new proposition. Given a subjective world of concepts, we can maintain order among them by this and the other laws; but we cannot make any assertion that is not implied in what we have already said. Thus, unless we have, beyond the laws of thought, some general proposition or propositions about experience, we can have no science of nature. The laws of thought by themselves do not allow us to deny, *a priori*, that what objectively exists is a Heraclitean flux without the reason which Heraclitus supposed to underlie it, and without the equivalence of measure which he held to be the rule of its transformations. Let us imagine ourselves endowed with the laws of thought and presented with such a flux. The Law of Contradiction is evidently of no avail if nothing remains itself for more than a moment and if there is no constant relation of it to anything else. It is true that we are still obliged to treat the momentary existence of A as inconsistent with its non-existence at that moment; but, if that is all, there can be no system of experiential knowledge. The formal law does not entitle us to deny the complete absence of perdurability or uniformity. Thus, on the one side, it is

valid for thought whatever our experience may be; and, on the other side, we cannot by means of it anticipate experience to the smallest extent. For real availability, it is absolutely dependent on there being an order of which by itself it contains no assertion.

In passing from Formal to Material Logic, we come first to the general principles of mathematical knowledge. Since Kant's investigation of these, it is allowed that they are "synthetic" and not merely "analytic". That is to say, there are involved in mathematical demonstration propositions which are neither an affair of hypothetical definition nor can be educed from definitions by means of the formal laws of thought. To take Kant's own examples. The geometrical axiom that "two straight lines cannot enclose a space" is not a truth that can be evolved by mere comparison of the concepts of the straight line and of space. Similarly with an arithmetical proposition such as $7+5=12$: no mere comparison of the concepts of the separate numbers can give the resulting number. In both cases, what is required is a construction in intuition or in the corresponding imagination, —a process of mental drawing, or of numbering things or events in time. And the peculiarity of mathematical principles is that, upon such construction, recognition of the necessary truth of the proposition is the outcome of a single act of comparison. Thus they are not generalisations from experience.

This last position of Kant has been contested from the experiential side. What remains incontestable is that, besides the principles of Formal Logic, mathematical science requires first principles peculiar to itself. The positions of Locke, of Leibniz, and of Hume in the *Inquiry*, are abandoned on this point. Kant's view as regards the peculiarity of mathematical reasoning, it may be observed, had been in part anticipated in the Platonic school. Plato himself had marked off Mathematics from what he called Dialectic—which was at once Metaphysics and Logic—on the one side, and from such an adumbration of Physics as was then possible on the other. Aristotle divided Metaphysics proper from Logic; and by Plato's successors, with the aid of the later Peripatetics, something was done to make clearer the precise character to be ascribed to mathematical truth. An intermediate position was assigned to it between laws valid for pure thinking, which are prior, and "laws of nature" emerging from observation or experiment, which are posterior. These distinctions were to some extent obscured in the early modern period, but may now be considered as

restored, though it cannot be said that definitive conclusions have yet been reached. It is henceforth clear, however, that the character of the special logic which belongs to mathematics can only be determined by an investigation like that of Kant's Transcendental Æsthetic. Such an investigation is necessarily metaphysical. Psychological theories of the origin of space as a mental form can at most furnish hints towards fixing the problem. Whatever the final result may be, Kant has determined the method of the inquiry.

For the classification of the sciences, it is sufficient to note that mathematical truth, though "material" and no longer purely "formal," does not yet suffice to determine anything whatever about the order of nature. This was fully recognised by Kant, who saw that before even "synthetic" propositions regarding space and number can be applied to phenomena, certain other general maxims, beyond both these and the laws of thought, are needed. The case may be illustrated as when we were discussing the applicability of the Law of Contradiction. Let us suppose ourselves to have the power of counting, and of drawing figures in an imaginary space. Then, if we can provide our constructions with names, and can somehow communicate with similar intelligences, we may work out a system of pure arithmetical and geometrical truth. But suppose that, so far as external nature is concerned, we are confronted with an absolute and lawless flux. Then we can do nothing whatever with our mathematical system. It is of no use to us that the results of counting and of drawing follow with necessity, if numerable things alter their number from moment to moment and figured things change their shapes at random. For abstract geometrical truth indeed it is not required that perfect triangles and perfect circles should exist in nature; but, for applicability of deductions about those geometrical figures, things marked out with figures that approximate to them must retain their shapes long enough for the deductions to be also approximately applicable during a time that is not merely infinitesimal.

To give us the least rudiment of physical or natural science, we evidently require some recognisable perdurability or constancy in things. This requirement is now expressed as the Uniformity of Nature. In antiquity it found expression partly in very slight outlines of a logic of Induction, but most expressly in axioms of which the general form was that nothing is produced from nothing and that nothing can return to nothing. This conception goes back to the beginnings of the Ionian physics. For the history of modern science, its

most important ancient phase was Atomism. The physics of Democritus and Epicurus, ready to the hand of scientific philosophers at the opening of the modern era, grew into the corpuscular Mechanics of the seventeenth century. Taken up again by Dalton from Newton, it received its most accurate and verifiable expression in the atomic theory of modern Chemistry. Meanwhile, with Descartes and the Cartesian school, there had come into clear view for the first time the idea of formulating a law of indestructibility of motion, as it was then put. For "motion" or momentum, Leibniz substituted *vis viva* or "force". At length, in the nineteenth century, the anticipated law was accurately formulated as the law of the Conservation of Energy. That Matter and Energy are alike perdurable through all change is not, however, sufficient for scientific uniformity. A law of sequence among the changes themselves is also needed. This has been expressed as the Law of Causation, and, in this expression, has been made a fundamental principle of Inductive Logic. In the modern development of the logic of Induction, the great names are those of Bacon, Hume, Comte and Mill. Since Mill, we have a logic of the investigation of nature comparable, in its systematic character, with the formal logic of Aristotle.

In their investigation of the subjective grounds of the principle of Uniformity, Hume and Mill applied themselves more specially to the philosophical or metaphysical problem. To Bacon must be ascribed distinctively the idea of methodical induction, in contrast with "induction by simple enumeration," and to Comte the idea of a scientifically certain or positive "law" of phenomena. On the metaphysical question there is now perhaps more agreement among philosophers than appears. Experientialists do not uphold Mill's view that the Uniformity of Nature is itself established by an induction from particulars; and the successors of Kant on their side do not think that experience can be constituted by mental forms or "categories" applied to a chaos of given sensations. Kant's position as against Hume being conceded to this extent, that experience has its formal elements which are as real as the matter of perception, Kantians or Hegelians hardly contend for more. The categories, they themselves allow, are immanent in experience, and do not need to be imposed on it from without. Indeed the notion that Hume was a pure sceptic without serious belief in scientific truth, or that Kant held nature to be a chaos put in order by the individual human mind, would be allowed to be too "schematic," and not agreeable to the deeper drift of

the thinkers themselves. Were "the given" a chaos, no subjective forms, call them "necessary" or not, could set it in order. Nor does it seem reasonable on the other hand that, if there are no intelligible laws to which it is really conformable, the modes of formulating it suggested from time to time by some of its casual conjunctions should agree so well with the rest. To maintain that there is now an approach to unanimity on these points may seem paradoxical. But, in the end, what historical reason is there for expecting that the opposition between *a priori* and *a posteriori* methods, or between Rationalism and Experientialism, will be the one permanent line of cleavage between philosophic schools?

After the logic of the sciences come the positive sciences as such. The first question that arises with respect to these concerns the position of Mechanics. Shall we, with Comte, place at the end of the mathematical sciences Rational Mechanics? Or shall we separate Mechanics as a whole from Mathematics, and make it the fundamental department of Physics? It seems to me that the incontestable portion of Kant's mathematical doctrine necessitates the second position. With Mechanics comes in the conception of "mass," which cannot be educed from space as a pure form of intuition, but has direct reference to data of sense supplied by the feelings of pressure and touch. Yet Comte's view was not altogether ungrounded. The higher branches of mathematics, such as those that deal with infinitesimals and with imaginary quantities, have been elaborated, as Prof. Bain has pointed out, in close connexion with physical investigations, and often for the sake of solving definite physical problems. Everything except their primary assumptions may have been evolved by pure mathematical construction and formal reasoning; but, if the assumptions themselves are not congruous with the physical order of nature, the theories as a whole remain mere curiosities, and can scarcely be regarded as in any proper sense "true". The reason for including them in Mathematics while excluding Rational Mechanics seems, however, to be this. In Rational Mechanics the idea of a moving mass is fundamental. In Mathematics, whatever may be the manner in which any of its peculiar assumptions are finally selected as worthy to form the ground of a special theory, they can be treated actually as determinations of space and number without direct reference to mass. This is of course the normal relation of a simpler to a more complex science. The fact that the more complex science furnishes it with some of its problems does not destroy its logical priority.

Under Mechanics come the Laws of Motion and the Theory of Gravitation. The latter theory was first definitely attained as the result of investigations in the concrete science of Astronomy. This, again, illustrates the relation just referred to. Gravity belongs to General Physics in so far as its theory, once attained, can be stated and worked out with reference to hypothetical masses, and without taking account of the actual masses and distances, empirically ascertained, of particular bodies in the universe. This distinction, insisted on by Mr. Spencer, was adumbrated in ancient schemes, Peripatetic or Platonic, by the division of the rational theory of the Sphere from Astronomy regarded as a partially empirical science; though the ancient distinction agreed more nearly with Comte's view in so far as the doctrine of the Sphere was assigned to Mathematics.

The divisions of Special Physics are in part determined by the particular senses receptive of the phenomena grouped together. Light, Heat and Sound refer unambiguously to the senses of Sight, Temperature and Hearing. These senses are not, indeed, allowed a share in the scientific explanation, which is referred to the so-called "primary qualities of matter," appreciated by the senses of touch and pressure; but without them the phenomena could not for us have been grouped together at all. Several senses being given, however, combined observations enable us to mark off other groups of phenomena which do not, as such, appear to a particular sense. Metaphor apart, we have no sensations of attraction or repulsion. Hence gravitation could not be directly observed, but had to be inferred from its effects in the form of pressure or motion. Electrical and magnetic phenomena have had to be indirectly appreciated in more various ways. Their common features once known, they could be made the subject of a branch of Special Physics, referred, like the others, to Mechanics or General Physics as fundamental. The reason why Mechanics is thus fundamental seems to consist essentially in the more permanently numerable and measurable character of the phenomena of perception that are its material.

Of Chemistry we may say generally that it deals with the compositions and decompositions of kinds of matter; whereas molecular Physics deals with states of aggregation of particles conceived as all alike. The complex way, however, in which Chemistry furnishes problems to Physics makes the borders of the two sciences difficult to define. For the perception of the qualitative changes going with changes of composition, it is worthy of note that the senses of taste and smell are

of account along with the others. As is of course the case also in the special branches of Physics, no demonstration that modified arrangements of simple particles accompany the qualitatively different phenomena can annul their actual differences of quality. Hence, even if matter as it must be for Mechanics were found to be everywhere ultimately homogeneous, this would not efface the division between Chemistry and Physics.

With Comte we must add to the list of objective sciences that are fundamental and abstract the science of Life. For vital phenomena are distinguishable from chemical as those from physical phenomena by presenting a new problem of general form, and not merely particular empirical aggregations to be explained by combining and applying the orders of scientific truth already determined. The general problem of Biology is fixed by the nature of living organisms, which, as such, manifest what can only in fact be described as an "immanent end". The parts of an organism act together in such a way that the union of their functions maintains, against resistances that do not overpass certain limits, the continuous existence of an individualised whole. This *consensus* of functions clearly presents a higher problem than those of Chemistry and Physics, inasmuch as we get no hint from any special sense or combination of senses for the demarcation of it. The preceding sciences furnish the instruments for dealing with the problem of organic life in detail; but that problem itself does not admit of a statement wholly resolving it into problems of Physics and Chemistry. And theories of the Evolution of Life cannot, of course, explain how there come to be living forms at all in distinction from the other objects in nature; nor, on the positive side, how those forms are transmuted so as to become, when considered in relation to the general conception of an organism, more "organic". What they really set forth is certain conditions depending on the existence of many kinds of organisms together in space and time. Those conditions being known, and the generally teleological nature of an organism being given, the account of living forms on earth can be immensely simplified; but the distinctive problem is not removed in this way any more than it is by the detailed study of physico-chemical processes in the particular organism. Of late, as it would be easy to show, philosophical Biology has become more and not less convinced of the irreducibility of its problem.

The transition from Biology to Psychology is marked by the introduction of a new method. To observation and

experiment, the methods of the physical and natural sciences, there is added introspection. This peculiar method is the condition of there being a science of Psychology at all. It has indeed been ascertained that the physiological functions of the brain are in some way concomitants of what is known to us introspectively as mind; but no observation of those functions, and no experiments, would have revealed the existence of mind in special relation with organisms if mental phenomena had not been known to us through our having reflected on them. Hence the proper name of the new science is not Cerebral Physiology, but Psychology.

By "Animal Psychology" in the diagram is not meant Comparative Psychology, or the study of the various manifestations of mind in different species of animals. This is a "concrete science". The fundamental or abstract science in relation to it is constituted by the study of mental synthesis in general previous to the formation of the Concept. Without this kind of synthesis, the actual phenomena of the human mind would, of course, be inexplicable; and, as it is common to man and at least the higher animals, the abstract science that deals with it may from that circumstance receive a name. Under this head may be studied the elements contributed to mind by the senses, and their grouping in accordance with the laws of association first ascertained by analysis of the phenomena of memory. Here already we have elementary forms of Emotion and Will, and of Reason as intelligent adaptation of actions to practical ends. The higher, and properly human, form of intelligence appears only with conceptual Thought.

To the Psychology of Man the transition is through Sociology, regarded as a fundamental and abstract science. Comparison of the various forms of human society is a concrete science, like Comparative Psychology. The fundamental character of Sociology is proved by its introducing a new mode of relation, namely, the relation between organisms that live in community and become capable of intellectual converse. In the evolution of human society, we must suppose that the passage has taken place from vague interchange of feeling and co-operation for common ends, to mutual understanding of ideas and fixation of a system of signs by which thought can control action. From the uttered sound associated with an image has been evolved the word which stands for a concept.

On Human Psychology the remark may suffice for the present that of course the power of conceptual thought modifies everything else. Perception, emotion and will are

nite other in man than they would be in an animal with nly "generic images" in the place of general ideas, and with only intelligent adaptation in the place of discursive hinking. The phases of the human mind called Emotion nd Will point to Æsthetic Philosophy and to Practical Philosophy (Ethics and Politics), as the phase of Thought points to Metaphysics. Here the last only, as having a more fundamentally theoretical character, comes directly into view.

While Psychology, with its peculiar method, first shows us the outlet—or the inlet—to reality, it is Metaphysics that gives the direct theory of reality. From metaphysical analysis of knowledge in general there results the doctrine known as Idealism. All the "objects" of the positive sciences are resolved into appearances, related in forms which, like the elements related, are such only for Mind. So far as the material elements of knowledge are concerned, idealistic doctrine seems to owe most to English Experiential Philosophy. For the theory of relations or forms, it owes most to Kant and the "Intellectualists". The truth in both lines of thought may be summed up in the position that, as the relations between the elements of experience are just as real, so also they are just as ideal, as the elements.

That Metaphysics must include Ontology as well as Theory of Knowledge is again becoming clear. Evidence of this is to be found in the frankly speculative attitude taken up by Mr. Bradley as the representative of one view, and by Mr. McTaggart as the representative of the other, on the question of the Immortality of the Soul, relegated by Kant with all other ontological questions to the Practical Reason. As an aid towards reclaiming the province of Ontology for Metaphysics, it may be worth while to attempt to contribute to the proof—independently, as I think, of what is sectional in any philosophic school—that the question, whether the individual soul is permanent, is accessible from the speculative side.

Acceptance merely of Idealism and of the formal Laws of Thought would not, it seems to me, give us sufficient grounds for approaching it. We need some real proposition about mind. Now if all that is is ultimately mental, and if at the same time no permanence beyond the moment can be asserted of that which is, then the hypothetical position in which we should have been if furnished with formal truths, but confronted with a material chaos, becomes actual. There is no reason, however, to acquiesce in this result. As against

it, we can explicitly state an axiom or postulate which certainly is not devoid of meaning: namely, that there is a whole of Mind and that that whole is perdurable. This seems, both in itself and from scientific analogy, the most reasonable position. It is already laid down in Plato's *Phædo*, though in a form which, through its close union with direct examination of the arguments for the permanence of the individual soul, has given critics trouble to disentangle. Thus it is, historically, nearly as old as the axiom of the physical perdurability of Matter. The Conservation of Energy, with its apparently intermediate position between physics and metaphysics, was naturally much later to receive satisfactory statement. Appearing for long in the guise of propositions about the ambiguous entity called "force," with its suggestion at once of inherence in matter and of subjective activity, it had to be defined as an altogether phenomenal truth, and thrown over to the objective side, before scientific clearness could be attained. Given the perdurability of Mind, as distinguished at once from the merely formal axiom of Identity, that A is A, and from the axioms, having reference to the object-world, that Matter and Energy persist in time, we can now state intelligibly the further questions: Are individual minds or souls alternately segregated from the whole of Mind and re-absorbed into it; there being thus emergence and cessation of ever new intrinsic differences? Or do they represent permanent distinctions, through changes of phenomenal manifestation, within a total intellectual system? To state the questions is not of course to answer them; but, once the general axiom of perdurability is admitted, they become accessible to the laws of thought. The criterion seems to be, Which supposition is most thinkable in accordance with the nature of mind?

To return now to a topic just raised under the head of Psychology. The amended classification of the sciences here proposed seems to exclude Practical and Æsthetic Philosophy. Yet these too have a scientific or speculative aspect, as on the other hand Metaphysics and Logic, which are included, may be treated not only as speculative sciences but as disciplines regulative of thought. Again, no place has been found in the diagram for the concrete and applied sciences. The answer to these objections is that any arrangement in space must necessarily be inadequate to the true order of the sciences, both positive and philosophical; since all of them together have their existence in mind or the unextended. A diagram can only serve as an aid to mental conception; it does not directly show forth the real order.

This is partly but not fully admitted by Mr. Spencer in relation to his own scheme when he says that a true classification of the sciences ought to be figured in three dimensions, and not on a surface. For not only do his tables, as he himself notes, exclude subjective psychology, which he regards as coextensive with all the objective sciences and antithetical to them; but, more than this, the use of a model in three dimensions would not enable him to bring it in.

The present adaptation of Comte's scheme to a more metaphysical doctrine—and indeed the original scheme itself—does not seem to be necessarily in rivalry with Mr. Spencer's. When it is recognised that every diagrammatic representation must be inadequate, the two classifications may very well be taken as expressions of different points of view. For philosophical use, Comte's point of view has this advantage. It brings out clearly that the sciences, in their ideal order, form a single organism of knowledge to which each is subservient. Mr. Spencer's scheme, on its side, brings out what is also a perfectly real aspect of science; namely, its tendency to branch into divergent specialties, which arrange themselves like groups of organisms at the termination of a process of biological evolution. This, however, is a less important aspect for the philosopher. And to keep it primarily in view seems less conducive to the reception of science into the system of general culture.

When the sciences are thought of as organically related to a whole, the advantages of the circular arrangement are easy to see. For this by no means indicates a definitively closed system. On the contrary, it might have served as the least inadequate representation from the time when cosmic science or philosophy first began vaguely to differentiate into particular sciences. New sciences would thus be seen introducing themselves in accordance with that process of "intussusception" by which a biological organism grows, and which Kant regarded as the true process of development for an architectonic system of knowledge. This, and not the direct historical succession of the sciences in agreement with their logical order, has been the real course of intellectual history. The supposition that the logical order of the sciences and the historical order in which they become "positive" are one and the same, is a defect in Comte's classification as it stands; though, as may now be seen, it is unessential to the use of it. There is no difficulty indeed in fixing arbitrarily the time when a science is positively constituted, and thus making the two orders

seem to agree; but, if we view the facts impartially, the supposition that they do agree may be easily refuted. Chemistry, for example, is logically prior to Biology; yet it was later to become a coherent body of doctrine. And Psychology, even in its higher department, is an older science than Sociology; which indeed is even now little more than inchoate, so that the definite place assigned to it in the series is still somewhat in advance of the facts. The sciences have not waited for one another, as Comte appears to have imagined, but have started up at intervals as occasion brought them into view; the higher sciences contenting themselves, if the lower were not "ready," with a few approximations to their laws, or in the meantime taking leaps in the dark. And at every stage since Greek science began, there has been some kind of general philosophy in more or less friendly relation with the special sciences.

Finally, it might be contended that something like the arrangement proposed has always been implicit in educated thought. To make out a case, it would only be necessary to point to the etymology of the word "encyclopædia".

III.—THE ABSOLUTE AS UNKNOWABLE.

By A. K. Rogers.

In the somewhat widespread revolt against the neo-Hegelian identification of reality with thought, or knowledge, there are evidently two courses which it is possible for one who sympathises in a general way with the Hegelian contention to adopt. He may attempt, on the one hand, to find some other form of experience actually open to us which is more adequate to the demands upon it than thought is, or, on the other hand, he may conclude that there is no such known form of experience within our reach, and may have recourse to a hypothetical synthesis, whose existence we are forced to postulate, but whose nature is entirely unknown. I wish in the present paper to consider certain aspects of this latter alternative in the form in which it is represented by Mr. Bradley.

Mr. Bradley's chief objections to Hegelianism are two in number. In the first place, life is more than thought, if we mean by thought what other people mean; and if we mean something different from other people, and do not define ourselves, we are talking in the air. Life is feeling and will, as well as thought, and so these also must come within the Absolute. In the second place, thought does not in itself supply an intelligible unity. It proceeds by way of relations, and this can never give us a unity which we really understand. Of course there is a certain *de facto* unity; things are somehow brought together in thought. But the mere fact that we can think of an object does not of itself make the object intelligible; and so long as, starting from a given point, we simply *find* the connexion of something else with it, as we do in relational thinking, we fall short of an answer to the real problem of philosophy, as to how this connexion exists.[1] Thought points in the direction of a unity, but never reaches it; if it did reach it, it would cease to be

[1] Mind, vol. v., p. 472.

thought. Accordingly the Absolute is, for us, unknowable. What we do know is not outside the Absolute, but it is inadequate to express its real nature. It is true that one concept may be more adequate than another, and philosophy is bound to give each its relative order of importance. But when we have reached our highest category, we are not, as Hegel thought, in the presence of reality in its own proper nature; the final synthesis still lies beyond.

Mr. Bradley is thus at one with the neo-Hegelian in representing the Absolute as a single experience within which all existence whatsoever is included;[1] he differs in holding that the self, or self-conscious thought, is not a final statement of this Absolute. The world is no longer a rounded intellectual system, such as we actually know, at least in its main outlines, with some degree of completeness, and appended to which there are a number of incomplete reproductions in the form of human lives. It is, indeed, extremely difficult to add on these latter to a world already complete in terms of scientific generalisations, and avoid the appearance of a number of selves as our ultimate, instead of a single self. If the individual is really to be put inside the Absolute, he will naturally be conceived, not as a reproduction of God's life complete intellectually without him, but as one of the constituent elements of this life, part of the stuff out of which it is made, as a sensation enters into and helps to constitute a conscious state of our own. But in this case, we may as well abandon at once the contention that, for our knowledge, the world is intelligible. By working up the material of our own lives, our sensations, desires, etc., into new and strange products in the life of God where they have their real truth, we are destroying our knowledge both of ourselves and God; we neither know the product, nor the fate of the constituent parts within that product.

Now in so far as Mr. Bradley is engaged in criticising the Hegelian theory of thought as the ultimate unity, I am in accord with him, at least in his results. But in trying to discover something higher than thought, and inclusive of it, there are two roads which it is possible to follow. We may take this "something higher" as a static something, in which the irreconcilable facts of thought, feeling, will are mixed together to give a product which is unlike any of them, and which our experience gives us no means of grasping; or we may ask whether this ultimate concept is not revealed in experience even as it exists for us. In other

[1] *Appearance and Reality*, p. 146.

words, we may consider whether these various factors may not find their explanation, not by being mixed together and changed in the operation, but by each retaining its proper character, and being given a place as one phase of a unitary process to which it is functionally related; and in this case the whole process within which these various phases appear would furnish our clue to the ultimate nature of reality, not thought, or feeling, or will, by itself, or combined with something else to form a new product. This latter is the conclusion I shall wish to suggest: the highest conception is experience as an activity, within which thought plays a particular part, to be determined more exactly by psychology; and it is therefore from experience in this aspect, as active, that we are to get our notion of reality as a whole.

Now the monistic postulate, in the first place, on which Mr. Bradley builds, I think is open to question. Because the world is a unity, it does not follow that it must be the unity of a single inclusive experience, or whole of feeling. There is a positive difficulty in the way of this which I do not think Mr. Bradley sufficiently recognises. A psychical fact is not something that, as a matter of direct experience, can be worked up into all sorts of new combinations, and still retain its nature unchanged; and accordingly the facts of experience as *we* feel them, in their apparent limitation, must either be denied altogether, even as appearance—and this is what we do practically when we say that our experience exists in reality, only in a wholly *different form*—[1] or else they must be taken as only *known* in the Absolute experience, and as falling in existence outside this. I think it is possible to say something for this latter conception of knowledge,—the conception that knowledge always implies the separate factual existence of the reality known, distinct from the experience of knowing, and that it is not merely the ideal extension of a fact immediately present in feeling. And all that I wish to point out here is, that if this could be established, there would no longer be any *impossibility* that thought should know reality as it is. Thought, says Mr. Bradley,

[1] We overlook the incompatibility of the existence *both* of reality, and of an appearance differing from the reality, because we have in mind implicitly the more usual conception of a reality *distinct* from our experience, which, of course, may be in itself very different from our subjective notion of it. There is no difficulty about this, because the appearance is made a second subjective fact existing alongside the real fact. But when we deny this separation, and make appearance and reality the very same bit of existence, I confess my entire inability to understand how any appearance distinct from the *real* appearance, *i.e.*, the reality, still remains.

always involves a separation of the what and the that. We get reality in feeling, but it is never the whole of reality; there are always broken edges from which lines of connexion lead us continually beyond. Thought is the endeavour to complete this partial reality given to us in feeling. It completes it, however, only by the application of ideas, and these are always meaning divorced from existence. The very essence of thought is thus its ideal character. Accordingly, while it can never be satisfied until idea and existence, the what and the that, are recombined, it also is impossible that it should reach its goal, since if it did so it would cease thereby to be thought, and become something quite different.[1] But this, it seems to me, is essentially the old demand that thought, in order to know reality, should actually be that reality. If the reality known must come bodily within the experience of knowing, then of course so long as we are thinking we cannot escape from mere thought. But if we can know, not simply that something exists, but something *as* it exists, beyond our act of knowing it, there is no reason why this might not be an experience whose nature was the nature of ultimate existence. It simply is a question now as to whether we actually have a form of experience open to us which is capable of standing the tests. Let us suppose that there is such a form of experience in our own lives, in which the objections to the relational aspect of thought are overcome; and that we can afterwards think of, or know, this. The *thinking* does not cease to be relational, of course, but the reality thought of does; and accordingly we cannot bring up the process by which we think it to prove that reality itself is still relational. Now the possibility of this rests, as I have said, on the supposition that the reality of which the idea is asserted is not, as Mr. Bradley would have it, an unknown synthesis, which is revealed to us by the actual presence of one section of it in our momentary feeling,[2] but rather a fact into which this feeling is not, in most cases, intended to enter at all. There is such a momentary feeling, and it reveals to us reality; it forms the medium, that is, through which our knowledge of reality is attained: but it is a medium which we entirely ignore, so far as the meaning, or reference, of the judgment is concerned. When I start to judge about an apple, my sensation is, indeed, involved, but I do not intend to say anything whatever *about* my sensation, or about reality as including

[1] *Appearance and Reality*, pp. 163 ff.
[2] *Ibid.*, p. 253 *et al.*

my sensation. Suppose, then, we are supplied with the notion of a reality which exists in a non-discursive form, and some knowledge of which in detail we have already acquired. We know that this detail is not exhausted, but this does not destroy the value of the knowledge we have; the object we know is red, and it is none the less red because it is round, and smooth, and has countless other characteristics which are still undiscovered. Apart, then, from any further judgment we may pass about this, we are able to know, or mean it—mean it as something which exists in its own truth, distinct from the perceptual experience by which we see it, or the possible judgments we might pass about it if we began to analyse. If, now, we go on to learn something new about the object, this, in *our process of discovery*, appears as a new relation which has to be added to the reality already there; *actually* we recognise that this process takes place only in our experience, and that the whole fact was already in existence in its non-discursive form before the judgment was made. If, however, this extraneousness of the object judged about to the elements of our experience is not heeded, we can never reach anything in knowledge which is not infected with the relational form. This is what I understand Mr. Bradley to maintain. There is a reality, and this reality shows itself in our experience—in feeling, sensation, perception. Sensation does not, that is, come as a duplicate of the reality known, but it is an actual element of the reality itself, and as such enters into the judgment. Judgment says that this reality, of which a section reveals itself in feeling, is extended beyond the mere feeling by the reference of an idea. Accordingly, the subject "this apple" —in the judgment "this apple is red"—does not represent a fairly adequate outline which is to be filled in by subsequent judgments, and which, by reason of its distinction from our knowledge of it, can be recognised as containing, in reality, a great deal of which we do not know; it is rather a component part of reality, which exists as the "burning focus" of our present sensational experience, and whose boundaries are to be gradually extended till it becomes we know not what in an ever-growing synthesis. The real subject is, therefore, the whole of reality, since the idea cannot be predicated of the nominal subject, which, by reason of its complete identity with our present experience and knowledge, is itself merely, and not itself completed by the idea.[1] In

[1] From the other standpoint the nominal subject is not identical with my experience, but distinct from it, and consciously recognised as going

every possible judgment the nominal subject thus points beyond itself; thought would no longer be thought if it ceased to be the reference of an ideal content, divorced from fact, and extending beyond the given.[1] Since, then, the ultimate subject of the judgment comes into our experience only under the form of feeling extended by ideal relations, and since these relations are *only* ideal, and we have no way of telling how they are reconciled with the real in the ultimate synthesis which we never reach, our last word must be that the Absolute is, not only in detail, but in every sense, unknowable.

I shall not attempt to argue here at length against this theory—the theory that judgment is the reference of an idea to a reality which is all of a piece with the real fact given to us directly in feeling. I shall be content simply to oppose to it the conception which seems to me more true. I should deny, once more, both that it is the feeling which is extended, and that it is extended by an idea. The sensation, or perception, has, so far as the purport of the judgment is concerned, nothing to do with the reality to which the idea is applied; this is rather the fact for which the perception stands as a representation, and from which it is as an existence entirely distinct. It is, again, not the idea as such which is applied to reality. The idea is simply our tool which we use to discover the attribute we are after; this attribute itself, however, is perfectly concrete and individual, and we recognise it as such. I am looking, we will say, for a piece of wrapping paper, and I guide my search by means of the concept brown. When however I say, "This paper is brown," I do not suppose that the paper has somehow been brought into connexion with an abstract colour, but only that here in the universe is a particular real piece of paper which answers in colour to my idea of brown, and which I can use, but whose colour is itself, of course, as definite a brown as could possibly exist. It may indeed be that I cannot tell exactly what this particular colour is, and I may not be, usually I am not, especially interested in its particularity; but, nevertheless, in any judgment which intends to refer to a concrete

beyond it in content; and so there is no contradiction in predicating the new attribute of it.

[1] I should say also that thought can never cease to move by way of relation, but this says nothing about the reality which is known by thought. If thought is not only a factor in reality, but knows other reality besides itself, then a non-relational fact may conceivably be known by a thought which still keeps the relational form, and an absolute truth by a thought which itself is partial.

existence, I am perfectly aware that the quality which I am referring to reality is a definite quality, and that it must be so for the judgment to have meaning.

Now I believe that this is our natural way of looking at the matter, and that, consequently, it has so much the advantage. It certainly does not fall in readily with our ordinary conceptions to suppose that the external world, so far as known, is nothing but a mosaic of bits of human experience, and that it probably has no existence at all apart from such finite centres of feeling.[1] Commonly it is believed most emphatically to have an existence independent of human sensibility. The only thing that would make a different theory acceptable would be the impossibility of justifying the common-sense view in any satisfactory way. I do not see why the conception of an ultimate consciousness distinct from ours, within which the outer world has its reality, is not a sufficiently respectable theory to deserve at least consideration.[2] It only remains, then, to ask whether we actually have a knowledge of any type of experience which overcomes the difficulties that Mr. Bradley finds in thought. And my thesis is that we have, in any conscious act of a non-discursive kind, a sufficient indication of the direction in which we are to look for this. Let us take a case where we are doing something in full consciousness of its meaning, but where the action is sufficiently habitual to do away with the need of our constantly having to form new judgments, or to think. In such an experience we have the elements of our activity present in their relations, without these relations being mere opaque facts; we do not start from A and *find* B, of whose connexion no further account is to be given, but B is already implicitly present in the end of action, by reference to which each partial element has its place determined. In the experience of consciously performing an act in which the relations of the various steps that constitute the act, the means that make it possible, are actively realised, we have, indeed, the only way in which Mr. Bradley's demand is conceivably to

[1] *Ibid.*, p. 273.

[2] Mr. Bradley mentions this in a foot-note (*Appearance and Reality*, p. 282) only to reject it with some contempt as hardly needing refutation. Of course if we follow him in his static conception of reality, there is some justification for this; the *mere* reduplication of a fact does not explain much. If, however, every fact of experience has a *functional* value also—and that for common sense is its obvious value—then the independent existence of the world for God's consciousness need no more be meaningless than my knowledge is useless because my neighbour knows the same thing. I and my neighbour have different parts to play in the world.

be met. That we should understand a fact, in distinction from simply having to admit it *as* a fact, has no assignable meaning except by reference to end or purpose. Of course, in any experience of ours, we come short of a self-existent and self-intelligible reality. Our experience is only a small part of the whole world, and so it can neither stand alone when we come to examine it, nor can it avoid the necessity of constantly having to stop and think, in order to adjust itself to new circumstances which lie outside of and condition it. An absolute reality would, on the contrary, contain all conditions within itself, and contain them consciously; every so-called past event would, in its relations, be eternally present; a step once taken would not drop from memory, as it does with us, and only persist as a *de facto* condition of present consciousness; it would persist consciously, as an influence which had its share in directing the course of future accomplishment. But while we have to recognise that any actual experience of ours falls short of representing adequately what the life of God must be, this does not prevent its exhibiting essentially the same general features; and if we thus get the type of reality in our own lives, it is comparatively an easy task to apply it to the outer world. What an object really means for us is its relation to our own activities. A chair means the act of sitting, paper the act of writing, a gun the act of shooting. Apart from such a unity of end, the object is but a congeries of relations, which we can think only discursively, by passing from one relation to another. But when the object is actually being used, those elements in it which have a bearing upon the end in view may come into an altogether more intimate sort of connexion. Here the whole act, and so the object as it enters into the act, may be bound together by the abiding presence in consciousness of the end towards which the action is directed —an end which is not something separate from the action, but which is itself realised in the various related steps which make up the action's progress. Relations are still there, in the sense that we have a complex whole whose parts can only be *thought* as related; but they are not felt *as* mere relations, but as phases of the inner unity of the act. Of course, however, metaphysically speaking, the act is not literally the object; as a means to the accomplishment of the act it can stand to us for the service it performs, but in itself it is a member of an independent and permanent world. This world never enters bodily into any experience of ours, and so we get at it in the first place only as a fact which we perceive or think about; and this knowledge of

it on our part is, like all intellectual acts, discursive and relational. To make the real object merely relational, however, is to lose sight of the fact that this relational form of thinking, even in our own experience, is not ultimate, but only a means to an end, which we should have no need of if we did not start with a knowledge that was partial and incomplete. Accordingly, while we can never experience objects directly, but must always approach them indirectly by the way of judgment, we can believe that there is a direct experience in which they exist, and in which the discursive form of thinking entirely disappears, as it tends to disappear in the activities to which our own thought leads up. Of course in this ultimate experience the object does not play the same part that it does in ours; the chair is not God's act of sitting down. We are constantly making this distinction between the objective purpose of a thing, and its subjective, teleological use with reference to our own lives. And in detail we can never tell just how objects enter into God's activity of consciousness. The general nature and meaning of his life we may, without egotism, suppose that we are getting gradually to know in the higher, or social, content of human life, but this does not tell us how any particular thing is related to this purpose. We can only discover the mechanical laws of this framework of the eternal consciousness, as represented in the relation of objects to one another, not to the meaning which they subserve. But if we suppose such an ever-flowing stream of conscious purpose, we have a *principle* of explanation for external things; they are the elements of this conscious life, as in the poet's dream the various images form the stuff of his inspired vision—elements which we cannot relate in detail to the whole, but which, nevertheless, we can believe are so connected, and thus are lifted above the merely relational form of existence which they present to us when we think them. Nor, on this theory, do we need to put outside the real existence of the object even its relation to human use; it is this, too, though it is vastly more than this. We need not suppose that cork trees were made for the sole and express convenience of the bottlers; this is on the face of it absurd. And yet, in point of fact, corks are made from the cork tree, and they fill a certain place in life, and so they cannot be wholly foreign to a reality which covers the entire sphere of existence. In the displacement of the theological by the scientific spirit, we have passed to an entirely exaggerated disparagement of the importance of the human element in the universe. If corks are made, we must suppose that

even cork-making enters into the meaning of the cork tree as an objective [1] fact; it is only when we promote this to the place of first importance that we run the risk of being absurd.

With this explanation, I do not think that Mr. Bradley's strictures as regards the self are any longer fatal. It is quite true that I can never in a single pulse of thought exhaust all the contents of my own life; I cannot exhaust all that is immediately present in the background of feeling, even, to say nothing of my past and future experience. But this is to make self-consciousness consist simply in thinking about oneself, in the purely intellectual enumeration of a given content. Such an act of thought might perhaps cover the whole ground in the end, but it would undeniably require time, and at no single moment would the whole be present. But if we find the principle of self-consciousness in an active process which *includes* duration, this objection is overcome. In so far as the elements of consciousness are related to an overruling end, they can be eternally present in a sense which is not possible in the case of a mere thought enumeration. As having a relation to the process as a whole, which needs to be taken account of in each successive step, they are, in their influence, still consciously present, even when in another sense they are passed and left behind; whereas they have no such continued existence if they are only thought of in the form of a list. It is true that my life, as mine, shows no such absolutely inclusive unity, but no one supposes that human experience is capable of standing without any change whatever for ultimate existence. My life is a gradual development, in which, by means of various partial and disconnected experiences, I *come to know* reality which exists before it reveals its meaning to me; and so it cannot adequately represent a life which is eternally self-conscious. But if the *principle* of self-consciousness is present even in these partial experiences, I do not see why it is not possible, on the basis of what we actually know, to conceive a whole of experience in which all elements are present in their relation to an inclusive purpose, and to do this without any self-contradictions.

Mr. Bradley's criticism of Hegelianism is, it is unnecessary to say, exceedingly acute, and I believe that up to a certain point it is conclusive. But in the conception which he would substitute for Hegel's he loses, I am persuaded,

[1] The objectivity of a thing of course includes, in any ultimate statement, its social relations.

the whole gain which Hegel has been the means of winning for philosophy. If Hegel's work is of any value, it is by reason of his finding the very core and centre of reality in the intelligible relations which are to be found, first in the physical world, and, at a higher level, in the social life of man. Reality thus becomes, not a something we know not what, out of all relation to our practical concerns, but it is thoroughly and genuinely knowable. Now to take all known realities as mere ingredients of a larger whole of experience, in which they are transformed and swallowed up, is to abandon this for what not even the doctrine of degrees of reality can prevent our having to call, again, an unknowable. It is one thing to say that some fact of my experience, my sin or suffering, which in my ignorance I call a blot upon the universe, does really have a place to fill, which we could understand if we could see the universe in its entirety; it is another to say that it does this by being transformed in a more inclusive state of consciousness. The first statement I should quite agree with; but I should insist that a conscious fact, in order to fill this place in a larger whole, far from being changed for knowledge, must be precisely itself. My suffering, as a fact of experience, is not changed by performing a service in the life of the whole; when I know the use which it serves I know more about it, but it is still just this same experience which I knew before, whose meaning is enlarged. There is a difference between a fact in the external world, and a fact of immediate experience, which Mr. Bradley ignores. A supposed fact may, it is true, be wholly altered by added knowledge, but this is possible only because the fact was not really what at first we supposed it to be, but was something quite different. This can be the case when we approach the fact indirectly, through the medium of knowledge, which may at any time be false or inadequate. But an experience *is* just what it is in experience, and nothing else. It can have new light thrown upon it, not, if we keep to the natural view, by being transformed in a larger consciousness simultaneous with it, but by entering into a continuous stream of consciousness, and so being related to a purpose. Each conscious act is itself alone; the added meaning which we afterwards discover concerns the part which it plays in the rational whole of action. In our own life, it can get its explanation by reference to the future course of our life history, though it still remains the sole and real fact at this particular point in the temporal series. Afterwards we come to interpret it differently, but this new experience does not flow together with the old; the two keep temporally quite distinct, and

both alike, in their distinction, are equally necessary steps in the whole process. And in so far as it finds its explanation in the purpose of the universe as a system of interrelated lives, it still remains itself; it has its relation to the eternal consciousness of God, not as losing itself in this, but as known to be itself and nothing else, and distinct from the wider knowledge of it which God possesses. There is, accordingly, no incompatibility between a knowledge of it which shall be adequate so far as it goes, and a wider knowledge of the conditions which make it possible, and of the purpose which explains it; the latter, far from overwhelming it, implies its existence exactly as it is experienced. And while the larger purpose may be only imperfectly recognised by us, it yet represents no new or strange form of experience, but something whose relationship to the elements which enter into it we have exemplified every moment of our lives.

IV.—ANTAGONISTIC REACTIONS.

By W. G. Smith.

It is customarily assumed, with the ordinary arrangement of procedure in reaction experiments, that the subject, in trying to carry out the direction to lift his finger from the key as soon as he perceives the stimulus, actually does lift the finger. No doubt in the majority of instances this is the case. But there are some individuals who, instead of lifting the finger forthwith, make a preliminary depression before the lifting is carried out. It is clear that this fact has an important bearing on several problems, in particular on the problem of the exact measurement of reaction time. This mode of reaction, which we may term the *antagonistic* form, in contrast to the *ordinary* form in which the lifting of the finger is carried out at once, is the subject of the following paper. The experiments here recorded were begun in the hope of discovering an explanation of certain irregularities in the results of some measurements of reaction time made with the Hipp chronoscope. The first series, mainly qualitative, was carried out partly in the Physiological Laboratory of Guy's Hospital, London, and partly in a private house where I was able to meet a larger number of persons willing to be tested: the second series, mainly quantitative, was undertaken in the Pathological Laboratory of the London County Asylums, Claybury, Essex. I am greatly indebted to Dr. Pembrey, Lecturer on Physiology, Guy's Hospital, and to Dr. Mott, Director of the Claybury Laboratory, for the liberal assistance they have given me in the course of the investigation, as well as to the many persons who have acted as subjects in the experiments.[1]

The essential point of the experimental methods employed was the use of apparatus by which differences of pressure

[1] The abstract of a communication given before the Physiological Society, 20th October, 1900, will be found in the "Proceedings of the Society," *Journal of Physiology*, vol. xxv., p. xxvi.

could be registered in graphic form. The instrument first employed was a sphygmograph used for transmitting pulse movements to a distance, the finger being rested on the button which is applied to the artery: connexion was made by rubber tubing with a Marey tambour the lever of which made a tracing on the smoked surface of a rotating drum. In some of the later experiments the sphygmograph was replaced by a piece of medium-sized rubber tubing lying on the table. The variations in the pressure of the finger are not registered so delicately when the tubing is used, but there is this decided advantage, that the antagonistic reactions, which are sometimes energetic, cannot make the extensive and troublesome tracing which is possible when the sphygmograph is employed. Time determinations were made by means of a time marker connected with an electric tuning fork giving 100 vibrations per second. The method first employed was that of allowing the time marker to begin marking hundredths simultaneously with the presentation of the stimulus. This

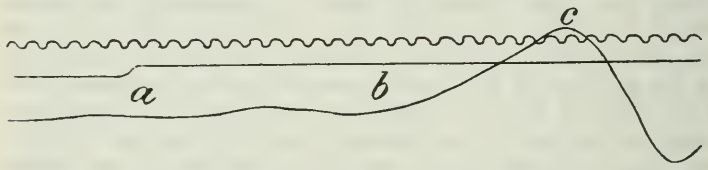


FIG. 1.—The curve is to be read from left to right; *a*, point of stimulation; *b*, rise of antagonistic curve; *c*, apex of this curve.

method however, though very convenient, requires certain corrections to be applied to the figures obtained, and in the later experiments (those summarised in Table I.) the method was adopted of having three simultaneous tracings in each reaction. One of these indicated the nature of the reagent's pressure or movement, one gave a continuous time tracing, while a third indicated the moment when the stimulus was given. A reproduction of a typical antagonistic reaction with accompanying tracings of time and stimulus is given below. It may be remarked that while in the ordinary form of reaction the lifting of the finger causes a fall in the curve which indicates the reagent's movement, in the antagonistic form the downward pressure of the finger causes a preliminary rise in the curve.

In the later experiments the reaction time was determined both graphically and by means of the Hipp chronoscope. The arrangement of the electric circuit employed was that in which the current actuates the magnets of the chronoscope

during the interval from stimulus to reaction.[1] The chronoscope was tested each day by the control-hammer. The great majority of the experiments were made with auditory stimuli—the sound of an electric bell, or some simple noise, such as the tapping of a telegraph key. In all the experiments of Table I., graphic as well as chronoscopic, the stimulus was given by the tapping of the key. A few reactions were made as a rule with an ordinary telegraph key before the graphic experiments began in order to accustom the subjects to the reaction procedure.

I am able to present results from thirty-three persons, twenty-five men, eight women. The majority of the subjects are very highly educated, a large number being employed in scientific work as teachers or investigators. Among these five give unmistakable and fairly constant evidence of the antagonistic form of reaction. In five cases this form is present, but is intermittent. In eighteen cases there is no trace on the curve of anything else than the immediate lifting of the finger, the curve where it falls being in some instances more rounded, in others more angular. In five cases the record is doubtful and difficult of interpretation. In other words, excluding these doubtful cases, we find decided evidence of antagonistic reaction in about a third of the individuals who have been tested. It does not appear to have any special relations to age, sex or temperament. In some of the cases the subject knew beforehand the object of the experiments; in others he was ignorant both before and during the experiments that the reaction movement was anything else than simple. Experiments made with two individuals showed that the phenomenon appeared both with auditory and visual stimuli.

The following tables summarise the quantitative results gained from six individuals who show the antagonistic form of reaction. I should have been glad to present a larger number of experiments, secured both by the graphic and the chronoscopic methods. But such an investigation is subject to decided limitations. The experiments were with few exceptions gained from persons who could not spare much time from their ordinary employments. On the other hand the taking and measurement of the reaction curves demands a great expenditure of time. The curve of reaction, being dependent on the subject's pressure, is subject to constant variation in the successive experiments, and account has to

[1] *Cf.* Kraepelin, *Ueber die Beeinflussung einfacher psychischer Vorgänge durch einige Arzneimittel*, s. 14.

be taken not merely of these variations, but of the fact that the writing point of the lever in moving up and down describes not a straight line but the arc of a circle. In measuring the reaction 'curves' I have not felt justified as a rule in doing more than dividing (with the help of lens, etc.) the space occupied by the hundredth of a second into halves, quarters or thirds. The results have all been calculated in thousandths of a second, but as the unit of measurement in the majority of the experiments was the hundredth of a second and as I do not wish to lay any stress on the more minute differences in the measurements, I have expressed all the data in terms of hundredths of a second.

Table I. includes data from three subjects who showed considerable constancy in reacting according to the antagonistic form. One subject reacted in this mode almost invariably: the other two, who are not so regular, were tested again after an interval of a year and gave similar results on both occasions. I was able in addition to carry out determinations on these three persons by means of the chronoscope. The graphic and chronoscopic determinations were, as far as practicable, carried out at the same time, and afford an opportunity of comparing the data supplied by the two methods. In all the experiments of this table the mode of reaction was sensorial, attention being concentrated on the sound. On comparing the lengths of sensorial and muscular reaction time by means of the chronoscope, I found that they were practically the same with the subjects B and C. The subject A, on the other hand, found the muscular reaction more difficult, and as a fact it was considerably longer.[1] Hence it seemed simplest to adopt the sensorial type of reaction as the basis of these experiments.

Table I.

Subject.	*n.*	*chron.*	*m v.*	*n.*	*st-r.*	*m v.*	*r-ap.*	*m v.*
A	57	·20	·03	27	·18	·06	·05	·01
B	38	·17	·02	25	·14	·02	·04	·02
C	42	·18	·02	74	·14	·03	·04	·01

n = number of experiments: *chron.* = reaction time by chronoscope: *m v* = mean variation: *st-r* = interval between stimulus and rise of curve: *r-ap* = interval between rise and apex of curve.

[1] As this case is of some interest in relation to the discussion on reaction types, it may be mentioned that the average length of the muscular reactions (40 expts.) was ·26 sec., *m v* ·05 sec. It was instructive to

The vertical column headed *chron.* shows the average length of reaction time as determined by the use of the chronoscope, while the column N, preceding it, gives the number of experiments on which in the case of each subject the average is based. In the second section of the table are given the results gained by the graphic method, the number of experiments appearing under N. The column *st-r* gives the average length of the interval between the presentation of the *stimulus* and the beginning of the *rise* of the curve which indicates depression of the finger, while the column *r-ap* gives the length of the interval between the beginning of *rise* of the curve and its highest point or *apex*.[1] The column *m v* shows in each case the mean variation of the data given in the column immediately preceding. In analysing and measuring the curves it has been assumed that the apex of the antagonistic curve corresponds to the point of time at which the contact of the electric key is broken in reacting by the chronoscopic method. This assumption is perhaps not strictly correct, but if the apex be not chosen it would be difficult to find any other point on the descending curve which can be more certainly and accurately determined. In any case the error must be small. A difficulty meets us also in finding the terminating point in the ordinary form of reaction. I have in this case chosen the point where the curve just begins to show the decided fall indicating the lifting of the finger: the difficulty in determining this point is however greater than in finding the apex in the antagonistic reaction, since the line of the reaction curve in the interval before the reactive impulse manifests itself is often not level, but undulates more or less owing to variation of pressure or physiological tremor. A similar uncertainty is apt to be found in determining precisely the beginning of the rise in the antagonistic reaction. Such difficulties are inseparable from the use of the graphic method for such purposes. It may be mentioned that the latent time of the

notice during the course of the investigation the different natural attitudes of the subjects towards the reaction process: for example, of the two demonstrators in a physiological laboratory one found the sensorial reaction 'clumsy,' while the other found it 'easier' than the muscular reaction.

[1] The following table gives the magnitude of the central value or median of the observations recorded in Table I.

	chron.	*st-r.*	*r-ap.*
A	·19	·18	·05
B	·17	·14	·03
C	·18	·13	·04

transmitting and registering apparatus was determined by a special set of experiments and that the figures given in the table are the corrected figures.

It will be observed that with two of the subjects, B and C, the chronoscopic results are very similar to those gained by adding together the data in the two columns containing the graphic results. The difference in the case of A may probably be explained to some extent by the fact that in the experiments carried out by the graphic method the drum was driven at a high speed by an electric motor: this caused a considerable amount of noise, which no doubt distracted the attention: it is to be noted also that on the different days when I was able to secure reactions the subject was suffering from a certain amount of fatigue. In each case the mean variation of the interval between stimulus and rise of curve, *st-r*, is highest absolutely, though relatively the mean variation of the antagonistic rise, *r-ap*, is the most pronounced. The percentage of instances in which the variation from the average bears the same algebraic sign for both these magnitudes, *st-r*, and *r-ap*, is for each subject somewhat over 50 per cent. (on the average 55 per cent.). This suggests that there is a tendency in these magnitudes to rise and fall concurrently, but the tendency is in any case not a decided one.

In the second table are presented the results gained from three individuals in whom the tendency to react in the antagonistic form is decidedly intermittent. The number of experiments recorded is somewhat small and there is no concurrent determination by the chronoscope. The columns have the same meaning as those in the former table, with the exception of that headed *st-f*: in this column is given the average length of the interval elapsing between *stimulus* and *fall* of the curve in those reactions which exemplify the ordinary form.[1] In this group sensorial and muscular reactions are taken together. The one subject, D, whose results are sufficiently numerous to allow of a comparison of the two types, showed no material difference in length in the two types when they were separately estimated.

[1] In the experiments of this group, in which the stimulus was the sound of an electric bell, the time registration was begun by the current which actuated the electro-magnet of the bell: the reaction times in the columns *st-f* and *st-r* are consequently longer than they should be by the latent time of movement of the bell hammer. Owing to accidental circumstances I was unable to determine the length of this latent period. Inasmuch as the problems discussed above do not involve an exact determination of the whole length of reaction time this error is of relatively little importance.

Table II.

Subject.	*n.*	*st-f.*	*m v.*	*n.*	*st-r.*	*m v.*	*r-ap.*	*m v.*
D	30	·16	·03	14	·14	·03	·04	·01
E	6	·20	·06	14	·17	·02	·04	·01
F	10	·17	·03	6	·12	·02	·05	·02

n = number of experiments : *st-f* = interval between stimulus and fall of curve : *m v* = mean variation : *st-r* = interval between stimulus and rise of curve : *r-ap* = interval between rise and apex of curve.

On the whole the values in Table II. do not differ greatly from those in Table I. The results in the column giving the ordinary form of reaction, *st-f*, suggest the interesting question, what is the relation of the reaction time in the instances in which there is apparently no antagonistic movement, to that in the instances where the antagonism is present? For an answer to this question we may take into account, in addition to the subjects D, E, F, the subjects B and C, who show the ordinary form of reaction as well as the antagonistic form. We find then that in four out of the five cases the ordinary form, *st-f*, is shorter than the total antagonistic reaction, *st-r* + *r-ap*,—while in four cases it is longer than the interval between stimulus and rise of curve, *st-r*. Taking the data of the five subjects together we find that the ordinary reaction is on the average less than the total antagonistic reaction by ·02 sec., and greater than the interval between stimulus and rise of curve by ·02 sec. Keeping in mind that the results are not sufficiently numerous for a final determination of the relations, we are still justified in concluding that, for the group of individuals tested, the ordinary reaction is not simply shorter than the total antagonistic reaction by the length of the antagonistic rise, *r-ap*. It is also clear that in a large number of instances the first muscular manifestation of the reactive impulse (as indicated by the rise of the curve in one case and by the fall in the other) takes less time to appear in the antagonistic than in the ordinary form of reaction : in other words, the true reaction time appears frequently to be shortest in the antagonistic form of reaction. It is possible that the lengthening of the ordinary form may be due to the circumstance that some reactions, which are apparently ordinary, may be in reality masked forms of antagonistic reaction : there may be an inner conflict of nervous impulses, which are not sufficiently strong to manifest themselves in the graphic tracing,

but whose total effect is a prolongation of the reaction time. But it is also possible that the greater intensity of muscular innervation which, as we shall see reason to believe later on, is probably the main cause of the antagonistic impulse, implies also a shortening in the time taken up in the innervation process.

The circumstance that there was no opportunity of carrying out a prolonged series of practice experiments may in some degree account for the fact that several of the subjects, *e.g.*, those whose results are embodied in Table I., do not show the difference in length between sensorial and muscular reactions which is emphasised by the Leipzig school. In general explanation of this fact, however, it seems most reasonable to refer to the view upheld by Baldwin and others, that there are different natural types of reacting. I am not able to say what the result ultimately would have been had the subjects tried to inhibit the antagonistic reaction. It is certain, however, that the attempt to repress the natural mode of movement would have involved a considerable distraction of attention, which at first, and probably for some time, would have resulted in lengthening the reaction time. It was not in any degree the object of the investigation to show what an individual can be trained to do, but to demonstrate certain marked natural differences in the mode of reacting.

It is clear from the results which have been presented that the reaction movement may be complicated, unknown to the reagent, by a preliminary antagonistic movement and that the time taken up in this movement is on the average probably between four and five hundredths of a second. This is an important fact which must be taken into account in attempting to secure an absolute determination of the time taken up in the different mental or cerebral operations. How far it has entered as a modifying and disturbing factor into the numerous experiments which have been made on this subject it is impossible to say. But now that the existence of this fallacy is known, it will be advisable in future to analyse the reaction curve of each subject graphically before trusting to the 'short and easy method' of the Hipp chronoscope. The matter would be comparatively simple if individuals persistently reacted in one way or the other. But as we have seen the reaction is in some cases intermittent, and the time relations of the alternating forms are by no means simple. It must be remembered also that the antagonistic reaction does not appear immediately on the application of the graphic test. In one subject there was

practically no trace of it till the fifteenth reaction was made: then we have the reaction indicated at *a*, Figure 2, which is followed by five others of the same kind almost equally distinct. In another subject it appears only once on the first day: next day it is clearer and more frequent; an example is given at *b*. In a third instance there is no appearance of it until the eleventh reaction is reached: this is reproduced under *c*. I have appended in each case, below the antagonistic reaction, an example from the same individual of the ordinary form: certain minor differences in the curves are due to the fact they were not taken with the same apparatus.

The qualitative experiments were arranged with the view of ascertaining not merely the presence or absence of antagonistic reaction, but also the part played by various factors in its production. The first point to which attention was directed was the possibility that the appearance of the

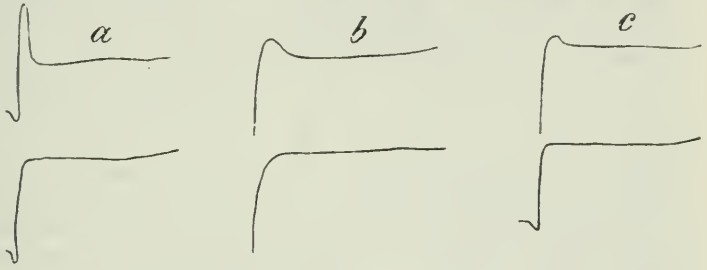


FIG. 2.—These curves are to be read from right to left. In each case an example of the antagonistic form of reaction is given above, of the ordinary form below.

phenomenon might be modified by the direction of the attention towards the sensorial or muscular processes. From the many experiments bearing on this point it is clear that this difference in the adjustment of attention has no marked influence on the mode of reaction. One subject was inclined to believe that the antagonism was more frequent in the muscular reaction, but the curves do not show any decided difference. The effect of fatigue has been observed in two cases. In one there appeared to be no change: on the other, towards the end of a prolonged series of experiments, the ordinary reactions tended to become more numerous. This return to the ordinary form may perhaps be interpreted as meaning that the reaction movement was made in a less energetic way.

Since in one or two instances where an ordinary reaction appeared during a series of antagonistic reactions the subject

explained that at the time his attention had been distracted, it was arranged to make a series of experiments in which distraction was caused by reading an interesting book. These tests, carried out with one of the subjects whose antagonistic reaction was extremely constant, did not show any resultant appreciable effect on the form of reaction.

A large number of observations were made with the object of determining whether the reaction had relation to any special set of muscles. Varying position of hand and arm and the use of first or second finger appeared to make no noticeable difference. Three persons, whose customary reaction was antagonistic, found that they could depress the finger without any preliminary lifting. It is, however, to be noted that one of these subjects was less constant in his form of reaction, while another showed in the curve of depression the rounded form characteristic of very slow muscular response. After attempting to secure the relatively isolated action of the finger muscles without the use of special apparatus, a series of determinations was made on two subjects, very constant in reacting antagonistically, in which the forefinger was firmly clamped between the second and third joints, the tip of the finger resting as before on the button of the sphygmograph. The mode of reaction was by no means so constant as before, but there was evidence of persistence of the antagonistic form, the evidence being less decisive in one subject. Similar experiments were made with the same subjects in which the back of the finger just behind the nail was laid on the button of the sphygmograph; the reaction movement in this group was carried out by flexor muscles, not as in the former experiments by extensor muscles. The result was similar to that in the previous group of experiments: the antagonistic reaction was present, but in a less clear and decisive form. It must however be noted that the effort to innervate the finger muscles alone, the upper part of the finger being held firmly, is an exceedingly difficult and unsatisfactory performance. It was only occasionally, according to the record of the reagent's observations, that it was possible to make a satisfactorily rapid and isolated contraction of the muscles in question: the effort usually brought with it at the same time involuntary and sometimes energetic contractions of the muscles of the arm, neck and trunk, or of all these together. In these circumstances I do not feel inclined to lay any great stress on the experimental results.

A much more satisfactory set of observations was obtained in determining the behaviour of the arm muscles in reaction

movements. The forearm was bandaged firmly along its whole length to a bar of wood, and a string, arranged so as to loop over the button of the sphygmograph, was attached to the forefinger, or in later experiments to the end of the bar of wood. The position of the sphygmograph was changed in successive experiments in order to admit of testing movements of the arm up and down, to the right and left. The two individuals referred to above were again subjects: the right arm was employed as in all the other experiments. In every direction of movement, up or down, to the right or left, there were observed preliminary movements in the direction opposite to that intended by the reagent. The movements are not equally constant in both cases, but the curves of both persons show the phenomenon unmistakably. It may be concluded from these observations that the antagonistic movement is not limited to any special set of muscles and that it occurs whether the intended movement is performed by flexor or extensor muscles, the degree of distinctness and frequency depending on the special groups of muscles employed.

In seeking for an explanation of these phenomena we may look at the problem first from the point of view of physiology. In any rapid movement there is an effort not merely to secure speed, but also to give the movement a certain degree of force or energy. Now it is a well-known fact in the physiology of muscle that preliminary tension of a muscle increases the out-put of energy: within certain limits the greater the load, the more work is done. We may assume then that wherever the tension of a group of muscles, *e.g.* the extensors, is momentarily heightened by the contraction of the flexors, the subsequent contraction of the extensors will be more forcible and powerful. Applying these ideas to the phenomena of antagonistic reaction, we could easily understand that in this form of reaction the final movements would tend to be more forcible, while their appearance, as determined by the ordinary reaction method, would be delayed: the involuntary adjustment of innervation would be directed to the attainment of force rather than of speed. The fact may be here referred to that in some cases in attempting to perform a rapid and at the same time vigorous action, such as striking from the shoulder, even when the movement starts from a position of considerable flexion, there is a tendency involuntarily to produce a momentary increase of flexion before the extension movement is carried out. It has been shown by Sherrington[1] that when one of a pair of antagonistic muscles

[1] *Proc. Royal Society*, lii. *et seq.*

is innervated, there is a simultaneous inhibition of the muscle opposed to it. This law is not in conflict with the fact of prior innervation of the antagonistic muscle: in fact the two sequent processes of innervation and inhibition work together to the same result and tend to secure the more effective performance of the final movement.

Looking at the problem from the psychophysical point of view we have to note that, in the interval immediately preceding the reaction, the idea dominant in consciousness is that of holding the finger pressed down on the key. Now it is quite conceivable that the excitation caused by the stimulus, acting as a sort of shock (to use the expression applied to sensorial reaction by one of the subjects), should in certain cases first of all and most easily cause a more decided realisation of the motor idea already holding possession of consciousness, in other words, an increase in the innervation of the muscles which are already in a state of tension. We have an instance of this sort of action in the behaviour of certain patients suffering from general paralysis, of the insane whom I have had the opportunity of observing. They were directed to react in the ordinary way to the tap of a telegraph key and they carried out the direction. But when the chronoscope, standing close by, was started there was observed a sudden increase in the tension of the arm which was to take part in the reaction movement. It is, further, possible that the phenomena of antagonism have certain relations, in some individuals, to the alternation of impulses of which we are conscious in deliberation, hesitation and doubt.

The physiological and psychophysical views of the phenomenon, though divergent, are not in opposition. The first is in general preferable, for it rests upon precise experimental data, but it is probable that the latter view gives a truer account of the process in certain instances: it is also possible that the different tendencies may sometimes support each other. More detailed experimental investigation will doubtless contribute to the understanding of the factors involved. There can be little doubt that further study of the phenomena of reaction by similar methods will lead to interesting results. Variations in the length of reaction time are usually dealt with merely in their bearing on the trustworthiness of the average value. But if we were better acquainted experimentally with the many elements which enter as determining factors into these variations, we might be able to make a much more extensive use than we can do at present of the reaction process as an index of the activities of the central nervous system.

V.—ON THE DISTINCTION OF INNER AND OUTER EXPERIENCE.

By George Galloway.

We may regard this problem from two points of view. In the first place we may treat the question simply from the historical standpoint, and try to show the causes which led to the gradual separation of experience into two different spheres, an outward and an inward. From the nature of the case such an investigation must be largely psychological. It cannot in itself be taken as determining the ultimate validity of the distinction, though it may furnish facts which an epistemological theory must take into consideration. But, in the second place, we can try to determine the real meaning and value of the distinction in the ultimate nature of things; and this of course will be a problem for metaphysical discussion. A larger inquiry of this kind may furnish the conclusion that experience is fundamentally one, and that outer and inner are only different phases or stages in its development. Or it may lead us to conclude that the contrast we make and act upon in our ordinary conduct is based upon a real difference which is more than one of degree. It will be convenient for us to consider first of all the genesis of the distinction.

For ordinary thought nothing seems more obvious than the difference between outer and inner experience. And one naturally assumes that a distinction, which he draws himself so readily, was always drawn with the same facility. But undoubtedly this cannot have been the case. If we distinguish two grades of experience, the former perceptual and therefore concrete and individual, the latter conceptual or generalised, it will only be at the second stage that the distinction is consciously made. The separation into two spheres, inner and outer, and the apt reference of experience to one or other of them, imply some development of the power of generalisation. To a merely perceptual con-

sciousness the act of reflexion which marks off the percept from the perceiving mind would not be possible. Nevertheless we must guard against a rigid division of perceptual from conceptual experience. For the process of development is continuous, and in perception itself unconscious inference is present. Even in the higher animal self-conservation implies a rudimentary capacity to draw conclusions. Only, however, on the level of conscious generalisation can individual experience receive a name and acquire a meaning. In his Lectures on *Naturalism and Agnosticism* Prof. Ward has justly insisted that conceptual thought is developed by intersubjective intercourse. In other words it involves language, and therefore a social system. It is not as an isolated individual but as a member of society that man has universalised his experience. On the other hand, we must bear in mind that intersubjective intercourse could not create an intellectual realm apart, but has only developed to clear consciousness elements implicitly present at the perceptual stage.

If, then, the distinction of outer and inner experience only becomes possible on the level of conceptual thought, how and why was it made and elaborated then? Great certainty on such a matter can hardly be expected. I shall first examine an ingenious theory on this point which is originally due to R. Avenarius. It is termed the fallacy of introjection. The theory is reproduced by Prof. Ward in his Lectures on *Naturalism and Agnosticism*, and for convenience I shall take his statements in explanation. Substantially the process called introjection rests on an error which is due to common thought and language. Its essence "consists in applying to the experiences of my fellow-creatures conceptions which have no counterpart in my own. . . . Of another common thought and language lead me to assume not merely that his experience is distinct from mine, but that it is *in* him in the form of sensations, perceptions, and other 'internal states'. . . . Thus while my environment is an external world for me, his experience is for me an internal world in him."[1] Consequently as we apply this conception to the experience of others, and they do the same for us, we are also led to apply it to ourselves, and so to construe our own experience in the light "of a false but highly plausible analogy".

The foregoing solution of the problem is plausible, but, as it stands, somewhat artificial and not quite convincing.

[1] *Naturalism and Agnosticism*, vol. ii., p. 172.

Beyond doubt intersubjective intercourse has been necessary to develop a distinction which implies conceptual thinking. But the part in introjection assigned to an "involuntary error" due to common thought and language is hardly intelligible and appears to be superfluous. Evidently some psychical growth is presupposed in the act of interpretation by which common thought places the thoughts and perceptions of another *within* him. The process of *inreading* would be meaningless unless each individual had already some key to it in his own experience.[1] Generalised experience implies a society, but it is not credible that men in society elaborated a distinction which did not somehow rest upon and appeal to the life-history of individuals.

What facts then led to the historical genesis of this distinction? One of the earliest would be the distinction of the body from surrounding objects. The beginnings of this separation take us back to the animal world. An animal would have no chance of survival in the struggle for existence if it did not note the difference between visual changes due to movement on its own part and those due to movement on the part of the object.[2] But man might have consciously differentiated his body from surrounding objects without recognising a soul or life within the body The phenomena of sleep and dreams must have decisively contributed to this further result. In the lower culture dreams are regarded as real occurrences, and are attributed to a second or shadowy self within, which can leave the body and return to it. In giving clearness to, and in marking off, the experiences of this inner self no doubt the utterances and testimony of other individuals were highly important. Then the voice and the breath coming from within seemed a witness of the reality of the soul in the eyes of primitive men.[3] When conceptual thinking had given some fixity and generality to the notion of a soul, we may conjecture that the phenomena of error and illusion—facts which must have been soon noted because practically so important—were treated in the same way as dreams and attributed to the inner self which of course was still conceived in a material way. A conscious contrast between

[1] A similar objection is urged against Avenarius's view of introjection by W. Jerusalem, in his suggestive book, *Die Urtheilsfunction*, *vide* p. 245.

[2] Stout, *Manual of Psychology*, p. 323.

[3] There seem to be reminiscences of ancient beliefs about respiration in the Ionic school. Anaximenes, for example, supposes the soul to be composed of air, ἡ ψυχὴ φησίν, ἡ ἡμετέρα ἀὴρ οὖσα συγκρατεῖ ἡμᾶς (Ritter and Preller, 20). Heraclitus speaks of it as a bright exhalation, ἀναθυμίασις.

objects given in presentation and objects reproduced in memory and imagination cannot be primitive, but when the differentiation was made the latter processes would naturally fall to be regarded as inward. We need only further mention the activity of the will, with the corresponding sense of a resisting environment, which would give force and vividness to the incipient distinction between an outward world and an inward self.

If our view be right, then, the distinction of outer and inner has its rude beginning in the animistic mode of thought: and animism, as Dr. Tylor and others have shown, is universal in the lower culture. Survivals among civilised races prove the presence among them long before of animistic beliefs. Avenarius supposes that the widespread phenomena of animism is an extension to nature of the principle of introjection as applied to human beings. This is true if introjection means nothing more than the attribution of a soul. But the act of interpretation by which we place the thoughts and perceptions of another man within him as "internal states" is a somewhat developed one. It is not natural to make the cruder phenomena of animism depend on introjection thus conceived. We do better justice to the facts when we conclude that the distinction of outer and inner has its germ in the experience of individuals. The distinction was then developed by intersubjective intercourse, and the notion of an internal soul came to be applied not only to human beings but also to natural objects. The idea of "internal experience" is later, and grows out of the theory of a soul or finer second self within the body.

We find then this theory of a fallacy of primitive thought does not solve our problem. But though we trace the distinction to a basis in the actual experience of individuals, the larger question of its final validity still remains. For it is always possible that thought may misconstrue experience. And, so far as we have gone, the division of our world into two spheres may or may not have a justification in the real nature of things. To this further aspect of the problem we now turn.

. The expression outer and inner when applied to experience is to some extent metaphorical. For experience is not a process carried on within the head, nor are objects which appear external to us and to one another on that account outside consciousness. The distinction of inner and outer is one which falls within experience, and what we call an outward object and an inward idea are alike states of consciousness. That externality in space is not externality to mind

was clearly brought out by Kant. It lay beyond Kant's mental horizon to discuss the distinction of outer and inner from the point of view of the historical growth of experience. But he accepts the distinction as justifiable and incorporates it in his theory of knowledge. That which is in space and time belongs to outer sense, that which is in time alone belongs to inner sense. And there is a necessary connexion between the two spheres, for that which is determined in space is determined from the side of the subject in terms of inner sense. By attending to the mental process by which all objects become possible the inward side of experience would be differentiated from the outer. But Kant afterwards saw that in putting this interpretation on the common distinction he involved himself in difficulties which affected the consistency of his theoretical philosophy. For the inner life was perpetually changing, and we could not, as he thought, apply to it the category of substance as the permanent in time. Nor could that product of Kantian abstraction, the spectral pure ego which was without content, serve as a permanent unity to which inner changes were referred.

Accordingly in the second edition of the *Critique*, in the "Remark on the Principles of Judgment," we find Kant modifying his earlier view, and asserting that outer sense is presupposed in the conscious determination of ourselves in time. "It is by means of external perception that we make intelligible to ourselves the various successive changes in which we ourselves exist. . . . No change can possibly be an object of experience apart from the consciousness of something that is permanent, and in inner sense nothing that is permanent can be found." On this view it would be as logically subsequent to and contrasted with the determination of objects in space that the consciousness of inner experience is possible.[1] It is of course evident that Kant in

[1] Dr. Caird thinks that the modifications in statement made by Kant in dealing with this point in the second edition of his *Critique* indicate a movement of his mind, of which perhaps he was not himself fully conscious, towards a larger and more consistent idealism (*Phil. of Kant*, i., 417, 614). I am not aware how far he is supported in this view by competent Kantian scholars. But I venture to think that Kant simply desired to give a statement of his critical idealism less open to objection and more carefully guarded than that which he had given in the first edition and in the *Prolegomena*. While he shows in the second edition that inner sense depends on outer sense, he also repeats that a phenomenon (*Erscheinung*) must be a phenomenon of Something (ed. Kehrbach, p. 23). And though he admits that this reference of perception to a reality beyond it might not be necessary for *intellectual* perception (*op. cit.* p. 32), yet it is no part of his theory that human intelligence is implicitly a consciousness which is capable of exercising an *intellectuelle Anschauung*.

his treatment of this distinction is greatly influenced by the general theory of experience which he found it necessary to postulate. He could not admit that the self was real in the sense of maintaining its identity amid its changing activities. Hence the fact of external perception was judged necessary to give the contrast of permanence over against inner changes. Yet in Kant's theory it is impossible to understand how a pure form of perception like space, when somehow superinduced on an affection of sense which is mysteriously given, could, even with the necessary help of the schematised categories, produce those *localised* objects in space which fill the field of outer experience. It is conceivable that spatial and temporal relations may have been evolved out of sense-affection as a form which is implicitly contained in it; but it is not intelligible how pure forms of intuition could be read into an alien matter. We refrain, however, from entering on a detailed criticism of Kant, for it will generally be admitted that his theory of knowledge is too unsystematic, too little penetrated by the notion of development, to be accepted as it stands. The motto *simplex sigillum veri* may not always be true, but the cumbersome and ill-adjusted machinery of the *Critique* of itself provokes doubt and unbelief. Let us rather see how Kant's view on this subject is amended and developed by Dr. Caird in his well-known treatise on the *Philosophy of Kant*.[1]

Inner and outer experience we are there told are only different stages in the development of consciousness, which in another aspect is the development of the object. From the simplest determinations of the object in space and time we advance organically through the categories, or forms of judgment, to the world as completely determined by reason or self-consciousness, which if logically posterior is the real presupposition of the whole movement. The later and more highly articulated stage of this development is, properly speaking, inner experience, and it can only be distinguished from the consciousness of the world in the sense that it is that consciousness in a more completely developed form. But as each fact of experience involves a reference to the self, so every outer experience will have its inner side. On the other hand, there is no inner experience which is not also outer, but we call it inner because the inner side is specially reflected on,—in other words we definitely recognise it as belonging to the self.

That there are elements of truth in this statement we do

[1] *Phil. of Kant*, vol. i., 614 ff.

not seek to deny. Inner experience could not consistently develop except in relation to and in distinction from outer experience. And what we call an outer experience must also have an inner side. Nor can there be doubt that in the historical growth of experience its two aspects have advanced *pari passu*. None the less it is difficult to regard inner experience as merely outer experience at a more concrete and highly articulated stage of growth. If we set aside for the moment the question whether the distinction between them can be minimised in this fashion, we might still argue that, from the point of view of psychological development, it is inner experience which is primary and outer which is derivative. A developed self-consciousness is mediated by the consciousness of objects, but in the last resort we must postulate a direct and conscious activity of the self as the ground and beginning of all progress in experience. There is a sense in which we must be immediately conscious of the operations of our own minds, and it is only as the result of inferential thought that we mark off a section of experience as outer. On this ground we should be disposed to modify Dr. Caird's statement, and to treat inner experience as fundamentally the more simple and elementary. From this standpoint development begins from an active self in relation to an environment, which gradually distinguishes that environment from itself, and by the aid of conceptual thought defines a portion of its whole experience as external.

But the further question remains whether a distinction of degree between outer and inner experience covers all the facts. Dr. Caird does not find anything in the object as determined in space which is not taken up into self-consciousness. The advance from outer to inner experience is just a process in which thought goes on to a more and more complete determination of things, till "it finds its own unity in the object".[1] It is hard to see how on this view the individuality and uniqueness which we discover in experience are explained at all. And in reference to the matter on hand this theory does not afford room for certain obvious facts. Inner and outer experience refuse to melt into one another in the way suggested. Mere reflexion on the inner side of an outer experience does not lead us to regard it as inner. A man, for instance, examining a statue critically in order to give his opinion of it reflects on the impressions he receives and recognises them as his own. Yet he would not call his experience an inward one. Even more decisively

[1] *Phil. of Kant.*, vol. i., p. 470.

would the same individual refuse to term outward his experience when, leaning back on his chair and closing his eyes, he thought out carefully the merits of several possible lines of action in order to select the best. And between the one experience and the other there would appear to him to be a qualitative difference. If every inner experience is outer as well, why do we habitually distinguish what we call subjective mental processes from the perception of outward objects, and contrast the one with the other? No doubt each outer experience has an inward side, and in virtue of this we sometimes wrongly interpret an inner state to signify facts in the external world. But we never mistake our perception of objects in space for a purely inward mental process. We find therefore a difficulty in accepting the view that the contrast of inner and outer experience rests entirely on a difference of degree in the development of consciousness. From this standpoint distinctions which are universally noted and acted upon are not adequately explained.

Against this it may be urged that inner and outer experience cannot be two diverse kinds of experience, for both are experiences of the one subject and are distinctions within the one consciousness. We have already admitted this. For the purely perceptual consciousness experience would be one, and the generalised distinction of outward and inward we know is made possible by conceptual thinking. But on the level of mediate thought, or rational inference, a new question presses itself upon us. We ask, Does the ultimate *raison d'être* of the distinction lie in the conscious selves who make it? Or is the inference reasonable that the experience which we name external gets its character from the implication of realities, which are not those of self-conscious subjects? In other words, Is outer experience the interpretation by self-conscious subjects of the action of reals which thought itself does not create? This we believe to be the true solution of the problem, and the explanation of the refusal of outer experience to be taken up into and merged in inner experience.

But before going further let us deal with an objection which is certain to be raised. The assumption that a trans-subjective real is implied in presented objects will be termed gratuitous. The apparent independence of the object, it will be contended, is entirely the outcome of conceptual thought. For the application of the concept generalises the particular experience of perception, and treats it as an instance of a general relation: and this just means that "we are conscious

we have before us an object which exists independently of its presentation in the particular case". On this view the seemingly independent outer object would be, if not relative to the individual thinker, yet relative to "consciousness in general,"—the rational self-consciousness which is the same in all human subjects.

In reply we may point out that conceptual thought depends for its individual reference upon perceptive experience, which is altogether special and concrete. As Kant himself granted, particular connexion in experience can only be learned from experience; laws of nature like gravitation cannot be deduced *a priori*. The ground then of the particular character of individual objects and the special relations in which they stand to one another can only be found in perceptual experience. It is indeed only by an act of abstraction that we can picture a purely percipient ego. But none the less this percipient consciousness must take note of and be affected by realities other than itself, in order that universal experience may have its specific side. For conceptual thought can only evolve out of perception what is implicitly contained in it. That the perceptive consciousness is not aware of this reference of the percept to something beyond itself is no disproof of the fact that there is such a reference. If inferential thought compels us to postulate this reference, we must accept its verdict. For we open the door to a hopeless scepticism, if we refuse to admit that the real must conform to what is rational. I shall now give one or two illustrations to show that experience is not explicable unless we posit such a transsubjective reality.

What we term external experience impresses us as containing an element of inevitableness. We are conscious that we have a share in directing the process of our thoughts or the movement of our limbs, but if we look to the heaven above or the earth around, the things we see we cannot help seeing.[1] The process of consciousness in the individual persons A, B, C and D, may be very different at a particular time, but at a certain moment they all, without choice on their part, register an experience X,—say the appearance of the sun. Let us call the percepts of A, B, C and D, *a*, *b*, *c*, *d*; then *a*, *b*, *c*, *d* contain an implicit reference to *x*, which becomes for universal thinking X. But suppose they do not, and that X is an abstraction elaborated out of *a*, *b*, *c*, *d*.

[1] Berkeley, in his *Principles of Human Knowledge*, distinguishes in this way perception from imagination.

Then there must be some reason in the series *a*, *b*, *c*, *d* why the abstract X should be evolved and not Y or Z. That is to say *a*, *b*, *c* and *d* must each be so qualified that it accepts the interpretation X but excludes Y or Z. *Ex hypothesi* the cause of the specially qualified percepts *a*, *b*, *c*, *d* cannot be found in the previous condition of A, B, C, D. Nor can the Abstract X give any common qualification to these percepts. Consequently the sudden manifestation to different minds, the consistency, the inevitableness of the experience we call X becomes quite unintelligible. And the facts remain inexplicable unless we admit that X is more than an abstraction, and is significant of something (*x*) which has a reality for itself.

We put the same point in a somewhat different light when we direct attention to the fact that a person refers various experiences which he has had at different times to one object A. He has seen A frequently, and believes that if he complies with the conditions he will see it again. For popular thought this is the common, if fallacious, argument for the independent existence of A as it stands. Plainly however A in its unique setting cannot be deduced from the universal side of experience: nor is there any constraining reason in the individual himself why he should refer various percepts to one and the same object A. That necessity comes from the side of the object, and A must stand for something which has had a determining influence on perception while it persists beyond it. Again, however inadequate the "laws of nature" may be as an explanation of concrete reality, yet they have validity in nature. They enable us to anticipate experience. An eclipse is predicted years before it happens, and it takes place exactly as predicted. Here we have a perceptual experience A furnishing the basis for a mathematical construction on which the forecast was made which was verified in perceptual experience B. Between A and B there is a process which need not come into consciousness at all, but must be real if B is to take place. The facts require us here to assume that the rational process by which B is deduced from A has for its counterpart an activity in things which thought interprets but does not create.

These are somewhat obvious instances, but we must not ignore their significance on that account. They all unite in enforcing the one lesson. We admit that the objects of outer experience are ideal constructions, but the facts compel us to add that these constructions can only be valid interpretations of a reality beyond. And in regard to the distinction between inner and outer experience we conclude that outer

experience has the special character which attaches to it, because it directly implies that the subject is influenced by realities other than itself. The subject creates the distinction, but it does so as its interpretation of a real difference within the whole of its experience.

We must now try to form a more definite conception of of this transsubjective reality which we find it necessary to postulate. But we require to state our position in this reference with some care. It will not do to argue that in "physical events" as distinguished from the subjective sequence of ideas we have the fundamental notion of externality.[1] For a 'physical event' is by no means a primitive datum of consciousness but implies ideal construction; and it is absurd to suppose that the object as it exists for developed consciousness has the same significance apart from consciousness. Influenced by these considerations, J. S. Mill, as is well known, defined matter as "a permanent possibility of sensations"; and he explains that these "permanent possibilities" are "not constructed by the mind itself but merely recognised by it".[2] That which persists through changes and has capacities must in some sense be real; but Mill gives us no light as to how we are to think of this reality. Nor, on the whole, has Kant's treatment of the subject been helpful. His "thing in itself" is at one point regarded as the positive source of sensations, but afterwards it is fined down to a mere limiting notion.[3] On neither view is the process of experience intelligible; and the conclusion seemed inevitable that philosophy must either return to the realism of Locke or advance to the absolute idealism of the post-Kantian thinkers. Without committing ourselves to this inference we may frankly allow that the notion of "things in themselves" is inconsistent as well as useless. That which *ex hypothesi* possesses no knowable qualities can never be coerced into active relations with elements within conscious experience. If this were possible the original assumption must have been wrong, and the 'thing in itself' instead of being an impenetrable mystery has some affinity to consciousness. It might seem, then, that in trying to do justice to the facts of outer experience we have reached an *impasse*. On the one side it appears impossible to explain the facts of sense-

[1] *Vide*, Mind, N.S., No. 22, p. 222.

[2] *Exam. of Hamilton*, 6th ed., p. 239.

[3] With this we may compare the Aristotelian ὕλη which is sometimes spoken of as mere privation—στέρησις, and at other times is regarded as a positive means through which individuals are differentiated.

perception if the object only exists as experienced. On the other side, if we postulate an unknowable reality behind the things of sense, the unity of experience becomes inexplicable.

There is one sense in which no sober idealist refuses to admit that the object of experience has a reality of its own. Among the objects of our experience are other human subjects who, we inevitably infer, have a reality for themselves. Entering into our experience they can never be dissolved into it, but persist beyond it. This is an admission of some significance. For it means that we recognise individual centres of thought, feeling, and will, which decisively influence our consciousness, while they are independent of it. Here we have a principle of individuality as object, whose qualities, as recognised and interpreted by us, are represented in it by modes of its own activity. And when we have admitted this we are bound in consistency to go further. The law of continuity, as justly insisted on by Leibniz, forces us to regard the principle of individuality as having many stages and degrees of development. There is no break in the process by which life advances to consciousness and to self-consciousness; and the line of separation between organic and what we call inorganic matter is a ravishing one. Moreover, the psychologist is compelled to postulate the reality of a subconscious mental world, in order to explain phenomena which are manifest above the threshold of consciousness. And it is reasonable to suppose that what is substantial in lower forms of life is one in kind (though very different in degree) with the conscious self in man. The latter would be the *ἐνέργεια* of which the former was the *δύναμις*. The real on which the ideational activity of the subject works in constructing the phenomenal world is, on this view, manifold spiritual substances or causalities; and the diverse qualities of the world as given in experience, would be grounded in the various activities of these substances. The basis of the phenomenon termed matter is, on this theory, an inner life which is allied to our own consciousness.[1] The point we wish to urge, then, is that, if you accept the world of intersubjective intercourse as a fact, you cannot restrict the principle to the relations of human individuals with one another. The interaction of individuals not existing merely for each other, but each for itself, must also be possible at lower stages of development, and there is no break in the process of advance from the lower to the higher. Hence

[1] *Cf.*, Paulsen, *Einleitung in die Philosophie*, p. 387; Stout, *Manual of Psychology*, p. 54.

there seems to be no valid reason why one should not admit that our so-called external experience involves the presence to our consciousness of manifold spiritual substances which are subjects at lower planes of development. A transsubjective real is inferentially necessary to explain external experience; and as we construe this real in terms of spirit and not of matter we cannot be accused of setting up a dualism which makes knowledge inexplicable. The constructive work of thought has been already referred to. But thought cannot weave out of itself the content of experience. Something must be given, and the requisite *fundamenta relationis* are supplied by individual reals, by everything which possesses a degree of inner life and is for itself as well as for others. On this hypothesis we do justice to the primacy and centrality of the inner life, while we avoid the absurdity of reducing external experience to thought-relations, or of positing unknowable "things in themselves" behind the phenomena of sense.

We are now in a position to deal with a point of some importance which bears on the distinction of inner and outer. We mean the spatial reference which the distinction suggests. It may be assumed here that neither space nor time can be an empty form having a real existence which is somehow applied to things.[1] They must, therefore, be in some way developed out of the content of experience itself: though not real in themselves they must be evolved from some basis in reality, or to use a phrase employed by Leibniz, they must be *phenomena bene fundata*. This point of reference to reality can only be found in the interaction of those individual reals which are the ground of experience. The mutual determination of different spiritual substances would be represented from the standpoint of the perceiving subject under the form of space. And inasmuch as all experience must be construed in terms of the states of a subject for which both itself and other selves exist, we have time as the universal form in which the subject represents everything that happens. The long history of experience and the generalisation which is its outcome have served to invest space and time with a seeming reality and independence of their own. Only the unworkable nature of this conclusion and the contradictions in which it involves him, shake a man's natural faith in an opinion which seems so well founded. It would be too much to say that the theory we accept satisfactorily solves every difficulty, but it avoids a twofold error. For it treats neither space nor

[1] *Vide*, Lotze, *Metaphysics*, bk. ii., chaps. i., iii.

time as an independent real, nor does it reduce them to subjective mental fictions which cut us off from reality. They are representations in the subject, but they are also valid forms under which he interprets what is real.

From the standpoint of the historic development of experience the universal point of view is late. To the merely perceptual consciousness space and time would not be distinguished. The "selective interest" or the practical need which turns the attention of the animal to space and time is concerned with the fact of movement which involves both. I refer to the temporal and spatial adjustments which are necessary to secure food, to seize prey, and to escape a foe. And it is from the association in man of active movement with the capacity of generalising that the differentiation and development of the ideas of space and time are due. The stages of this progress are however matter for psychological discussion. The final result is that space is hypostatised as a comprehensive whole which exists for itself, and which contains within it all that generalised experience treats as an independent reality. And language has given universal currency to the habit of speaking of what is believed to belong to the mind as *in* it and of what does not belong to it as *outside* it. Philosophic reflexion forces us to correct this abstraction. Both the spatial image and the object it contains are shown to belong to the mind as ideal constructions. Yet the common-sense point of view has a certain justification. For ideal construction is at root interpretation; and in the existence and activity of transsubjective realities lies the possibility of our representing to ourselves the world of objects extended in space.

In the remainder of this paper I shall try to answer certain objections which may be made to the theory of reality we have accepted. You have admitted, it will be said, the presence of ideal construction in experience, why should you infer that so-called things are anything more than such constructions? A thing, however seemingly solid, is only the meeting-point of universal qualities or relations. In reply it may be asked, What is meant by a meeting-point? Evidently something which serves as a ground of identity and a bond of connexion between the qualities. These cannot fly loose and unclaimed in the world of experience. For if in a sense they belong to reality as a whole, yet they definitely pertain to particular determinations of reality and not to others. No doubt if we suppose that qualities are somehow attached as adjectives to isolated fragments of reality, we shall be proved inconsistent: the substance does

not exist outside its attributes. But this objection does not apply when we conceive the 'support of qualities' after the analogy of the self, and construe the qualities themselves as representations in consciousness of the interaction between spiritual substances.[1] In a similar spirit it is said that to advocate the reality of things is to champion a mere fiction of the mind. For the so-called thing is "ruined by thought": it goes to pieces under the touch of the speculative inquirer. Popular thought is certainly arbitrary in the way in which it applies the name; and we do not deny that things are sometimes mental fictions. A bag of grain might be called a 'thing,' while the name would not be given to the contents spread out upon the floor. But popular terminology does not concern us here; and we prefer to speak of individual reals which have a being for themselves. These are not due to ideal construction, but are presupposed by it, for without them thought would not have data on which to work. Obviously it will not be possible for us, with our present knowledge, to distinguish what is individual at levels of development far distant from our own.

But even in this sense, it is contended, the existence of individual reals cannot be maintained. The more we reflect the better we shall see that the significance of every predicate involves relations which force us to go beyond the individual itself; and the further we carry the process, the more unreal becomes the abstraction which remains. The fact is, as we learn, that an individual, or monad, is a fiction; it is reducible to a mere adjective which falls within the only true individual, the universe as a whole—the one ultimate reality.

As a result of this drastic argument not only 'things' but conscious selves are 'ruined,' or at least they should be. For the reasoning employed, if valid, ought also to undermine the individuality and identity of the human self by dissolving it into a changing tissue of relations. The logical consequence of this argument must be to discredit any theory of reality which the human ego can form. Experience, on the contrary, testifies to a self which distinguishes itself from its states and maintains its unity in them. And it is after the analogy of the self that we conceive the individual reals which are the ground of the external world as perceived.

It will still be urged that the test of the truth of any theory is its coherency; in other words, if we can "think

[1] It will be said that this is tacitly to admit that the individual is only qualified in virtue of its relations. I do not think so, for the qualities which become explicit through interaction point to positive differences in the monads themselves.

it out" consistently in all its bearings, we establish its claim to truth. And individual reals cannot be "thought out" without yielding up their reality to the absolute. That there is an element of truth in this contention we do not deny, and we will return to the point presently. But if you reduce individuals to mere appearance and turn their identity into a fiction, in the ostensible interests of rational explanation you are ignoring facts which require to be explained. If like Parmenides you say that the *one* only is and the *many* are not, you have still to account for the illusion of 'not-being'.

Suppose for the moment that thought did compel us to merge all individuals in the one perfect individual or absolute, I do not see how on this supposition we are to explain the appearance of individuality within the whole. For it can hardly be maintained that the illusion is due to the abstract method of ordinary thought which concentrates attention on one aspect of reality and neglects the rest. On this assumption the term might be applied or rejected according as the point of view changed. Yet there are centres of experience which claim to have a reality of their own from whatever standpoint they are regarded. And one cannot understand how, if the theory of reality we are considering be true, such a claim could ever come to be made. But, it may be urged, the rights of logical thought are supreme, and to deny these rights is to pave the way to a scepticism of the worst kind. And certainly if thought and reality are not ultimately consistent, philosophical discussion must be fruitless. Still it does not seem to me that the demands of coherent thinking forbid us to attribute reality to individuals which are not themselves absolute. If you assume that the individual *is* simply its relations, then it may consistently be deprived of any being for itself in the ultimate system: but the validity of the conclusion is spoiled by the inadequacy of the premises. The self which thinks, and so relates itself to other objects and objects to one another in the relational form of consciousness, is not the whole self. And though we are bound to accept the relational system as a valid interpretation by thought of what is given in experience, we are not entitled to say that the whole self of experience is exhausted by this interpretation. Thought presupposes experience, and in some form experience must have preceded the genesis in time of intellectual activity. It is just because experience is richer than thought that a self, or individual centre of experience, is, in Prof. Ward's phrase, a *fundamentum relationis*.

A few further observations on this point may be made. Mr. Bradley has justly remarked that the subject in a judg-

ment must always have a reality beyond the predicate. To reduce the two sides to a fundamental identity as aspects of one thought-content is to destroy the possibility of predication.[1] And this must apply to the judgment of self-consciousness as well as to that of perception. Thus, when we predicate thought of the self, the judgment is made possible by the fact that the self is also a centre of feeling and will, and cannot be dissolved in the pure unity of thought. This distinction makes the judgment significant; and self-consciousness is an illustration of the principle that the object of thought is more than thought. On the other hand, all three elements are embraced in the self as subject of experience, and so the self is not a reality beyond experience in this wider sense. We are not, therefore, entitled to argue that the subject of experience is equivalent to thinking-subject, and on this ground to claim that the object is thought and nothing more. The reality to which I refer my states of consciousness must always be more than these states. We have already tried to show in what way we think this reality is to be conceived.

It would be futile, however, to deny that those who believe the hypothesis of individual reals to be justifiable and even necessary are not in a position of great difficulty when they try to explain their place and meaning in the ultimate system of things. Dr. Ward, for example, in his Lectures on *Naturalism and Agnosticism* accepts the principle of individual selves or centres of experience, but it is somewhat difficult to understand the relations in which he conceives these centres to stand to the Absolute. God, we are told, is "the living Unity of all," and behind the development of experience there can only be "the connecting conserving acts of the one Supreme".[2] Moreover Dr. Ward admits real contingency in the divine working, but it is the contingency "not of chance but of freedom". In his view the divine Unity which comprehends all is evidently not that of a system where all the elements are determined in relation to one another and to the whole. A view like the foregoing requires a good deal of explanation, and if it obviates certain difficulties, it also exposes itself to certain criticisms. In any case it would have been interesting and valuable to have had a more explicit statement on this point from so able a thinker. For it is just on this question of the relation of individuals which are real to the Absolute that opponents press home their arguments most strongly. Thus it is urged, "those who cling to the idea that there is an absolute

[1] *Appearance and Reality*, p. 170. [2] *Op. cit.* vol. ii., pp. 280-281.

principle of individuality in man and in other finite substances seem necessarily to be led to a denial of all real connection or relation between such substances."[1] It must be granted of course that there can be only one absolute Being, and a plurality of *res completæ* is impossible. To claim such absolute reality for individuals would be suicidal, seeing that each is only an element in the universe, and all must find a place and receive a meaning in a coherent system. For this we require a supreme connecting and organising activity which is present in all individuals. Lotze tries to satisfy this need by saying that all substances "are parts of a single real Being".[2] Yet if this statement be accepted as it stands, it does not appear possible to resist the inference that the Pluralism, which philosophy found it necessary to postulate at an earlier stage, is only a temporary hypothesis, and is superseded when thought rises to the final synthesis. The use of the term 'substance' in this connexion has been objected to. Wundt, for example, criticises it, and would substitute for it causality or activity.[3] But it is not clear that the material associations which, as he points out, cling to the one word are absent from the other. Moreover, if we are to think of activity at all, it must be as the activity of something real: and we do not mean more when we use the word substance to denote a centre of experience. In his *Microcosmus*, Lotze has stated somewhat differently his attitude to the ultimate Unity which philosophy strives after. "It seems to me that philosophy is the endeavour of the human mind, after this wonderful world has come into existence and we in it, to work its way back in thought and bring the facts of outer and inner experience into connexion so far as our present position in the world allows."[4] The note of caution here is justifiable. For our thought is necessarily infected by spatial and temporal metaphors. And space and time on any view cannot adequately express the nature of the Absolute. We are inclined to forget that categories which are valid within experience cannot be employed in the same way to the ultimate conditions of experience. And it is evident that no category at our disposal is entirely adequate to explain the relation of the Absolute to the individual.

[1] Caird, *Evolution of Religion*, vol. ii., p. 83.

[2] *Metaphysics* (Eng. trans.), vol. i., p. 165.

[3] *System der Philosophie*, p. 427. Paulsen's position on this point is, I think, just. He advocates the use of the term *substance* here, only demanding that we first make clear what we mean by it. Atomistic associations are of course out of place.

[4] *Microcosmus* (Eng. trans.), vol. ii., p. 718.

The result of our discussion then is, that the facts of outer experience lead us to infer that the individual subject is here in direct relation with a system of other-selves. In inner experience again, the subject's own activity is primary and relation to other-selves is only indirectly implied. But though we claim that the monads are real, the reality which pertains to each individual can only be secondary or derivative. For the individual has its determinate character elicited through interaction with other monads, and the whole system presupposes an organising ground and principle of unity. If we desire a figurative expression of this unity in difference perhaps we might find it in the connexion of soul and body. In an organism the separate parts, or members, are essentially related to one another, while each has its specific function in the whole. The soul again, or the ἐντελέχεια to use Aristotle's word, is the presupposition of the organism and the ideal principle which gives it meaning and truth. By some such analogy we may conceive of the Absolute as immanent in all individuals, yet allowing to each a definite function and degree of reality in the whole, while its own being is not lost in the process of finite experience. For that the universe is a coherent whole is a presupposition both of thought and of ethical action.

A further observation may be added.

In any view we take of the ultimate Unity, we must not ignore the world of ethical and spiritual values. For the facts of moral and religious experience have as good a claim to be taken into account as the facts of science. The tendency to "excessive unification," which Aristotle objected to in Plato, has always been a danger to which philosophy is peculiarly liable. And a philosophy, which in the interests of system undermines the moral-responsibility of the individual and treats religion as an illusion, lays itself open to the charge of explaining away what it cannot explain. The intellectual necessity we are under of striving after unity in all experience must be conditioned by the ethical necessity by which we postulate that the Supreme Reality satisfies our spiritual nature. There can be no final dualism between the two spheres any more than there can be between inner and outer experience. But the Absolute, be it remembered, does not merely explain an aspect of the world but the world as a whole. And a thinker whose outlook is catholic will try neither to ignore nor to misconstrue any phase of experience in order to secure unity of system.

VI.—DISCUSSIONS.

EXISTENCE AND CONTENT.

Both in the *Principles of Logic* and in *Appearance and Reality*, Mr. F. H. Bradley has demonstrated the fundamental importance for Logic and Metaphysics of the problem involved in the relation of "existence" to "content". In it the keynote to his own system of thought is to be found: with it T. H. Green, in his treatment of "feeling" and "relation" vainly strove: Kant, himself, under the caption of "Sensibility" and "Understanding" found there the pivotal points of the theory of knowledge.

In continuing the investigation of this problem we shall assume several positions advanced by Idealistic philosophy. (1) Reality can be stated, and consequently has meaning, only in terms of Experience. (2) By Experience is meant not the mere private and limited Experience of any finite individual but the absolute medium to which investigation of the final structure of Reality leads us. (3) Knowledge is the instrument by which Reality is definitely determined for us.

As Mr. Bradley's formulation of the problem is recent and most exact, we shall use his treatment as the starting-point of our own investigation. His difficulty may be stated thus. The recognition that Reality and Experience are identical leaves us entirely in the sphere of indeterminate existence. We know *that* Reality is found in every aspect of experience, but its *determinate* characteristics are not thus revealed to us. Reflexion upon "existence" is required before its indeterminateness is reduced to the definiteness and coherency of "content". But "content," however determinate, is constructive. Its meaning is embodied in abstract universal ideas. Knowledge therefore is essentially a process of substituting *general symbols* for the concreteness and fulness of immediate experience. Furthermore "content" is always fragmentary and is developed piecemeal. Accordingly, to Mr. Bradley's mind Knowledge appears to mutilate the given Real. Were it even thinkable that Knowledge could overcome its fragmentary nature, the difficulty would remain that "content" is altogether abstract and general. Knowledge is hopelessly infected, constitutionally diseased. The difficulty is fundamental, involving every aspect of meaning from the simplest to the most complex. No

category, even that which involves the barest determinations of Being implicated in the distinction of a "this" from a "that," can escape. Mr. Bradley is driven to the conclusion that Knowledge is a perversion of experience: "content" conceals instead of exhibiting Reality.

And it is not to the point to maintain, as do certain members of the Idealistic school, that the reflective transformation, which "existence" undergoes in thought exposes a more complete and inclusive Reality. Such argument errs in mistaking determinate, conceptual meaning for concrete individuality. The source of the error is found in an unconscious equivocation in the use of the terms *determinate* and *inclusive*. Looking toward the desired outcome of their thought, these Idealists use the terms as meaning something more concrete and individual than what was previously had in mind. For them, indeed, to be determinate and inclusive is equivalent to being concrete. The single, determinate, all-inclusive Reality of Green, Bosanquet and Caird is intended to be quite concrete. In fact, however, it is a highly organised concept, and is therefore essentially abstract. The original Totality was concrete but indeterminate: the reflective Whole is determinate but symbolic. In the process of transformation the individuality of the *given* has escaped. This result is veiled from the above-named writers in several ways. First, by the dialectical conviction that to determine experience ideally is equivalent to revealing its concreteness. Second, by the device of including the particular as well as the universal within the movement of the dialectical transformation. We are reminded that if percepts without concepts are blind, it is equally true that concepts without percepts are empty: particular and universal are essentially correlative and equally valid. Now this may be quite true, and yet the difficulty raised by Bradley remains unanswered. For when we look more closely into the arguments of the writers above mentioned we find that the second leads back to the first and the first to the defect indicated by Bradley. It may be admitted that percept and concept, particular and universal, are correlative. We may go so far as to insist that the *meaning* is identical in both, and that the distinction rests upon the use to which it is put. Meaning used freely and apart from its original embodiment is conceptual: meaning embodied in some individual aspect of experience is perceptual. The more definitely we set ourselves to the determination of meaning, the more do we overlook the individual embodiments of ideas and tend to set up the organised symbol of reflexion as ultimate Reality. For this reason it is correct to say that the all-inclusive Reality of Green and others is no more than an all-inclusive Concept. No doubt these Idealists desire to retain concreteness. Although Green's thought is somewhat elusive upon this point, still one can find an indication in his writings that the Absolute somehow includes the immediacy of feeling with the mediacy of thought. But to such a result his method

does not entitle him. For if the Real is to be constituted by meaning, if the indeterminateness of felt experience inevitably resolves itself into the determinateness of relational experience, this Ideal Whole must be taken as the final Reality. Of this necessity Green appears to have been conscious to a certain degree. Throughout his work he endeavours consistently to reduce feeling to relation, while, at the same time, he appreciates instinctively that immediacy must be *included* and not *reduced*[1] within the Absolute.

This unsolved problem of Green forms the starting-point of Bradley's contribution to English speculative thought. While admitting the value of Green's work, he insists upon its limitations. He recognises that if meaning *constitutes* Reality, thought inevitable falls into contradictions. In the first part of *Appearance and Reality* he has applied this insight in detail, and has shown specifically that the fallacy of substituting the abstract for the concrete leads universally to the dialectical illusion which causes us to take regulative principles for metaphysical entities. Substantive and Adjective, Relation and Quality, etc., when set up as absolute, contradict themselves and turn out to be mere Appearance. Meaning is relative; it is Appearance and not Reality. This is the burden both of *Appearance and Reality* and of the *Logic*. Meaning cannot constitute Reality; for every endeavour to substantiate it lands us in hopeless contradictions. For this reason Bradley recognises a distinction between "existence" and "content". "Existence" is direct and immediate experience, experience felt and not reflected upon, the inexhaustible storehouse of reflective construction. "Content" embodies the results of reflective activity. In its completeness it is determinate and inclusive but abstract. Meaning realises itself in symbols. It sacrifices colouring to definiteness. As matters stand, therefore, we must admit the point of Bradley's contention. Reflexion is essentially a transforming of the immediate and given. It is also a substituting of a fragmentary though definite experience for that which was more complete though quite indefinite. It may be that a reason for such high-handed procedure on the part of Reflexion can be given, but it must be admitted that such a reason is required. To grant the contention, however, is to admit that meaning cannot *constitute* Reality. This raises a further question: "Has meaning a legitimate function?" At first it might appear as though Reflexion were essentially destructive. If we take the position that Reality resolves itself into meaning, then we must admit that thought involves itself in hopeless contradictions. If again we measure meaning in terms of the immediately given, we shall be forced to accept Bradley's contention that thought mutilates Reality. If still further we recognise that the difficulties and contradictions of thought are brought to light through the operation of thought, we shall be led to think that some solution of the difficulty is possible. But this solution

[1] *Cf. Prolegomena to Ethics*, p. 51, § 50.

may be sought in various ways. We may postulate with Bradley an inclusive immediate Experience in which the contradictions and discrepancies of reflective thinking are overcome and shown to be somehow real contributions to the active life of the Whole. Such a standpoint, however, can never lead us beyond the conviction that somehow or other the diremption effected by thought *must* be made good. To Bradley's mind the solution can never be given properly until the content of the Whole is grasped in an immediate perfect way: knowledge in other words is validated only in the Absolute. For us it must remain hopelessly infected, constitutionally diseased. If the nature of each factor is valid only when its position in an absolute synthesis is found, it is evident that we are left without any working criterion whatever. And no matter what else is true, this must be granted, that thought and knowledge appear to have meaning for the finite and the human. It is evident, therefore, that although we grant to Bradley a distinct contribution in forcing upon us a reconsideration of the problem of Knowledge, his own contentions do not lead us to any positive outcome. The true solution of the difficulty is to be found in a closer examination into the function of thought. Meaning is constituted through the development of ideas. What is true, therefore, of ideas must also be true of thought and of knowledge. Now ideas are symbols, and their function is regulative, not constitutive. Instead of supposing that ideas serve the purpose of setting a limit to reflexion, we must regard them as instruments of control in mediating exchanges between different aspects of experience or in transforming one into the other. So surely as ideas are set up as limits to the process of Reflexion, so surely must we sacrifice the immediate to the mediate without thought, or on the other hand regard the process as impossible or illegitimate. In either case difficulty awaits us. If, however, ideas are no longer set up as limits to reflexion, but are regarded as instruments of control, we avoid the old contradictions by removing the source of difficulty and at least place the problem upon a different plane. And what is demanded at this point is that we carry through the analysis of ideation and meaning. When we do so, it becomes evident that our contention is well founded. It has been recognised by logicians that ideas are symbols, and still full use has not been made of the information thus gained. As symbols, ideas have a double value. They project in our minds (*a*) the anticipations of certain definite experiences; (*b*) the conditions under which these experiences may be realised. Meaning, therefore, is essentially regulative. As an anticipation, it flashes before us the determinate experiences which we may expect in a given set of circumstances: as a condition, it calls our attention to the means by which the experiences may be realised. Knowledge rests, generally, upon the recognition that new experiences can be realised through the operation of appropriate conditions, and specifically upon the determination of the exact conditions which

at any given moment control the realisation of just the experiences which we desire or anticipate. The criterion, as will be seen, lies in the transformation of anticipation into direct experience. Knowledge in its essence is thus essentially concrete. With Bradley we may agree that the development of ideas is a substitution of the abstract for the concrete, of the partial for the more complete, of the cold and bloodless for the warm and vital. But in addition we recognise that, as symbols, ideas constantly and as part of their inherent purpose carry us back to the concrete and the individual. That they succeed in their purpose (as is evidenced by every moment's experience and by science) is the justification of their existence. Knowledge is thus set upon an entirely new plane. When we ask concerning truth and falsity, we are no longer referred to an all-inclusive Whole, be it concrete or abstract, but to the relation of anticipations and conditions. Meaning no longer sets up on its own account, but performs the more modest function of regulating activity and of mediating determinate experiences. When it has shown exactly what experiences may be legitimately anticipated through the operation of such or such conditions, it has done its work. That new puzzles are constantly appearing in no way invalidates the general principle, and therefore the question of the ultimate content of Reality becomes of no moment whatever. That Knowledge has developed means that in the process of time mankind has become increasingly aware of possible experiences and of their conditions. That Knowledge will develop, means that mankind will continue to extend the range of legitimate anticipation and to develop more precisely the connexions between conditions and their outcomes. That mankind can thus determine its sense of Reality is the proof of the real value and nature of Knowledge. The search for an impossible all-inclusive Whole becomes uninteresting and useless: the development of Knowledge resolves itself into the differentiation of effective instruments of experiential control: their organisation into systems means increase of power, ease of movement, enrichment of individual experience. Meaning is inherently regulative: Reality is revealed to us ever in new forms. To search for a final statement is to change regulative principles into constitutive entities, and thus to destroy their significance. "Content" must therefore remain as a dynamically developing instrument of mediation between the terms of equally developing "existences". Reality is found in both terms, but is made determinate in the process.

S. F. MacLennan.

VII.—CRITICAL NOTICES.

Philosophy, Its Scope and Relations; an Introductory Course of Lectures. By the late Henry Sidgwick, Knightbridge Professor of Moral Philosophy in the University of Cambridge. London: Macmillan & Co. Limited, 1902.

This volume forms a welcome supplement to the published works of its lamented author. It serves to define his position in reference to questions of general philosophy which are dealt with only incidentally, if at all, in his works on ethics and politics; and there is an occasional intimacy in the expression of personal opinion in these lectures which one does not meet in the judicially balanced discussions in his other works. It is of important service to contemporary thought to have its main problems and their proposed solutions submitted to the critical scrutiny of so independent and sincere a thinker. There can have been few men who possessed in so high a degree as Sidgwick the spirit of intellectual fairness which enabled him to appreciate whatever real force belonged to an argument; and the same scrupulous intellectual conscience made him the most searching critic of the weaknesses and ambiguities lurking in many fashionable theories, whether of the naturalistic or the idealistic order.

The volume is based upon courses of lectures delivered at Cambridge within the last ten years, and has been judiciously edited by Prof. Ward. The title describes more accurately than is the case with most books the actual contents of the work. The earlier lectures seek to reach a definition of 'the scope of philosophy' in relation to, and in distinction from, the sciences. The relation of Philosophy to Psychology and the meanings of the terms Metaphysics and Epistemology as compared with the larger term Philosophy are then discussed These five lectures may be conveniently spoken of as the first part of the book. The second part (Lectures v. to xi.) deals more in detail with the relation of Philosophy to History and Sociology, and is in fact a careful discussion of the value of the historical method and the limits of its application to ultimate philosophical questions. This is probably the part of the volume which will attract most general attention. The last lecture which is somewhat detached from the rest has a title arising out of the definitions of the earlier lectures—'The

Relation of Theoretical to Practical Philosophy'. It deals—unfortunately far too briefly—with the postulate of Theism, or at least of Moral Order, as a solution of the divergence between 'what is' and 'what ought to be'.

It may be admitted that philosophers sometimes spend too much time in the demarcation of the different departments of their subject. To assign a problem to a specific department is not to solve it, and a reader impatient of formal distinctions and anxious for real nutriment may occasionally suspect that such relegation of a question is a convenient postponement of a troublesome difficulty. The use of such discussions, however, is obvious. Controversy, as Sidgwick puts it at the outset, usually implies mutual misunderstanding among thinkers. "If a thoroughly distinctive and comprehensive definition of the province of Philosophy could be worked out and universally accepted, its acceptance would mean that we were at least agreed on the questions that the philosopher has to ask, if not on the answers that ought to be given to them: and to ask the right questions is, as Aristotle saw, an important step towards obtaining the right answers" (p. 1). The want of a consensus of experts which so notoriously distinguishes philosophy from science suggests this method of approaching the subject. As he wittily puts it, "the differences of philosophical schools are so great and fundamental that it would seem to be only by a polite fiction that a philosopher of one school allows a philosopher of another school to possess philosophical knowledge on the subjects that he treats: and the politeness that consents to this fiction is not universal" (p. 6). It may be easier, therefore, to come to approximate agreement when we try to define "the knowledge we *want* rather than the knowledge we think we have got" (p. 13). Our definition, Sidgwick adds in the spirit of Aristotle, should be "*as far as possible* in conformity with common usage". He begins by provisionally accepting Spencer's well-known account of philosophy as completing the unification partially achieved by science, but states the relation more precisely thus, in accordance with the epistemological trend of modern thought: "Philosophy deals not with the whole matter of any science but with the most important of its special notions, its fundamental principles, its distinctive method, its main conclusions. Philosophy examines these with the view of co-ordinating them with the fundamental notions and principles, methods and conclusions of other sciences. It may be called in this sense 'scientia scientiarum' (p. 10). Spencer's conception of the unifying function of philosophy is, however, defective, he argues, on account of the exclusive stress which it lays on relations of identity or resemblance. A system of knowledge must explain differences as well as similarities. Thus Newton's identification of the fundamental laws of terrestrial and celestial motion explained at the same time the differences—explained, that is, why bodies fall to the earth approximately in a straight line, while planets go round the sun in

ellipses. The doctrine of Evolution, on the contrary, as generalised by Spencer and applied to the inorganic matter, to the organic world and to the world of mind, does not help us in the least to understand how the one differs from the other. Sidgwick also repudiates the suggestion that either science or philosophy is concerned merely with phenomena; both alike aim at a knowledge of realities. Spencer's definition, he proceeds to argue, is defective in another important respect, inasmuch as it seems to include only the positive sciences, thus "neglecting the fundamental distinction between 'what ought to be' and what actually is or appears" (p. 23). Besides 'theoretical philosophy,' which seeks to unify the positive sciences, room must be made for 'practical philosophy,' which deals with the principles and methods of Ethics and Politics. "The discussion of the ultimate end of right conduct is *not* concerned with 'the co-existences and sequences of phenomena'" (p. 24). It is true, some thinkers endeavour to treat Ethics as a purely descriptive science, but even they cannot avoid looking at it as an art based upon certain positive sciences rather than as itself one of these sciences. Practical Philosophy is "a supreme architectonic study of ultimate ends," subordinating some ends to others and endeavouring to systematise all the elements of human good in 'a theory of rational action as a whole'. It is thus "a study distinct from and in a manner parallel to Philosophy as conceived by Mr. Spencer;" and "the final and most important task of Philosophy is the problem of co-ordinating these two divisions of its subject-matter, and connecting fact and ideal in some rational and satisfactory manner" (p. 30). To do this belongs to Metaphysics in that aspect of it which used to be called Rational Theology. Some considerations on this subject are contained, as has been already mentioned, in the concluding chapter and in a Note on the relation of Philosophy to Religion.

A long lecture is devoted to the Relation of Philosophy to Psychology. The distinction between their respective methods of treating their common subject-matter is clearly drawn on lines generally accepted. Philosophy deals with thoughts and beliefs as true, psychology with the processes by which beliefs, whether true or false, arise in the individual mind. But the chief part of the lecture is devoted to a discussion of the relation of mind to the material world. Mind may be related to matter in two quite different ways; a mental fact may have a material process in the brain as its antecedent or concomitant, and it may also have a material thing present to it as an object of cognition. Sidgwick rightly remarks that, in spite of their fundamental distinctness these two relations are sometimes confused. Spinoza's theory of perception might have been cited as an example. In regard to the nature of the first relation which, he remarks, is "in the forefront of speculative interest at the present time for educated people generally," Sidgwick objects to the phrase that "mind and nervous action are the subjective and objective *faces of the same thing*," because it

obscures the essential disparateness of mental facts and nervous changes which Spencer elsewhere explicitly acknowledges; and by suggesting "that the manner of connexion between the two so-called 'faces' is manifest and their separation inconceivable," it takes an insensible step towards materialism. The fact of concomitance being admitted, the crucial point in debate is whether the causal nexus is to be conceived as lying wholly on the physical side. Sidgwick does not himself discuss this question but he points out that it is a question which neither Psychology nor Physiology, nor both together, can solve. It belongs to Philosophy to decide it or at least to muster the considerations which make for the one side or the other. The empirical psychologist may therefore leave the controversy on one side.

It is this first relation of mind to matter which gives to Materialism any support or plausibility which it possesses; Idealism or, as Sidgwick proposes to call it, Mentalism arises in connexion with the second or cognitive relation of mind to its object. Mentalists (with whom may be classed Phenomenalists or Relativists) analyse matter as an object of perception into purely mental elements, either of the nature of feeling (Sensationalists) or of the nature of thought (Idealists of the type of Green). As against all these, Sidgwick announces his own metaphysical standpoint to be "speaking broadly that of what has been called since Reid the Philosophy of Common Sense or Natural Dualism" (p. 42). He warns us against supposing that he means in a few pages to discuss and decide this issue, but he argues that the question is one for metaphysics to determine and that empirical psychology does not decide it in favour of mentalism, as it is sometimes supposed to do. 'Reflective analysis' resolves our cognition of matter into secondary qualities and relational qualities of extension and incompressibility; 'psychogonical analysis,' in the hands of Relativists and Sensationalists, traces back this combination of percepts and concepts to association of sensational elements. But even should this 'conjectural history' be true, the conclusion drawn by the Sensationalist involves "a fundamental confusion between antecedents and elements". It has moreover to be observed that, while denying the extra-mental existence of matter in one relation, his own account of sensation usually assumes that existence in another relation as the physiological basis of the mental facts he is describing.

The two lectures which follow on 'The Scope of Metaphysics' begin by repudiating the dyslogistic application of the term which would make it equivalent to 'inquiries which experience has shown to be futile'. 'That is not my view,' says Sidgwick bravely, 'I think that the questions, which—according to the traditional meaning of the word—it is convenient to distinguish as metaphysical, are, in part at least, questions to which as rational beings we are bound to seek some kind of answer;—though we may have to content ourselves with a very imperfect and provisional

answer. . . . The interest of the questions is too profound to allow them to be simply ignored: so that even those philosophers who refuse to ask the questions have to give a reason for their refusal" (pp. 78-79). A definition of metaphysics is arrived at by contrast with the generalisations of the physical sciences, of empirical psychology and even such cosmic generalisations as the doctrine of the conservation of energy or the theory of evolution, all of which, even while claiming to be universally true, profess to rest on verification by particular empirical cognitions. Sidgwick's definition, therefore, is almost verbally identical with Kant's, although few men in the main stream of modern thought have been less under the influence of the Critical philosophy. "Metaphysics aims at ascertaining what, if anything, can be known of Matter, Mind, and their relations, besides such knowledge as is based upon or verifiable by particular empirical cognitions: that is, what can be known *a priori* and what can be known as necessary or universal elements or conditions of Mind and Cognition" (p. 90). The phrase 'verifiable by particular empirical cognitions' was adopted to meet the case of the Transcendental Method itself; for inquiries proceeding according to that method would certainly claim to be 'verifiable by experience' inasmuch as its results are got by reflexion upon the nature of experience as a whole, and yet they are obviously to be classed under the head of Metaphysics. The short discussion of Transcendentalism which follows and the appended note on 'Transcendentalism and Idealism' are perhaps the least profitable part of the volume. Transcendentalism is a method of approaching philosophical questions rather than any single definite theory.[1] Sidgwick appears to connect it exclusively with the question of the 'reality' of space and time. "I am not convinced," he says, "by the arguments tending to show that Time and Space, Motion and Change are unreal and merely apparent." But surely the alternative here suggested is misleading. I should myself agree with him when he declares his inability "to form any clear, useful or definite conception of Reality out of Time and Space"; but for all that Time and Space are still forms of thought, and the fact that they are forms of thought does not make them 'unreal'; Transcendentalism in the largest sense is simply a method of demonstrating that reality is rational. We do not get here, however, anything beyond a summary statement of Sidgwick's personal position in regard to 'transcendentalism generally'. A fuller discussion of the subject, in connexion with the theory of T. H. Green, is promised in a volume of ethical papers already announced for publication.

Epistemology and Ontology are treated as complementary aspects or functions, rather than separate divisions, of Metaphysics, "for, in the main, when we have decided the most important epistem-

[1] I admit, however, that *Transcendental Idealism* as a technical term of the Kantian system has a specific reference to the doctrine of the subjectivity of Space and Time.

ological questions, we have, in my view—implicitly though not explicitly—decided the most important ontological questions".

The lectures forming the second part of the book may be taken as a criticism of the militant saying, repeatedly referred to, that the historical method has 'invaded and transformed all departments of thought'. In what sense and to what extent is this true? Mathematics and abstract physics, Sidgwick points out, may be said to be unaffected by historical considerations. The nebular theory does offer us a 'speculative physical history' of the physical universe as a concrete fact, but however far we carry it back, it leaves the differences or particularities of the cosmic fact as unexplained as at the beginning. In the nebula, 'the heterogeneity has not disappeared, it has only been broken up smaller'. If we pass to Biology, it is certainly true that the historical or evolutional method has transformed our knowledge of the organic world, but it is no less true that our theory of past change is based upon conclusions formed from scientific study of the present. Then, again, the Darwinian theory of the origin of man is often supposed to carry with it, if not materialism, at least the impossibility of the old belief in the continued existence of the individual after his physical death. But Sidgwick's conclusion is that such an inference is entirely illusory; the theory 'leaves the metaphysical problem of the relation of mind and matter exactly where it was'. As applied in Psychology, the method tends, as already argued, to confound psychical antecedents with psychical elements. "No 'analysis' of any conception or belief can, I conceive, show it to be something other than careful introspection shows it to be. Analysis can only ascertain conditions, antecedents and concomitants" (p. 151). We are here, however, brought face to face with the question how far the validity of beliefs can be affected by an investigation of their origin and history. This investigation is conducted by Sociology, and in considering the claims made for the historical method in this connexion we may perhaps better term it the Sociological method and speak of the relation of Sociology to Philosophy. The question then is "how far a sociological inquiry into the history of our beliefs can and ought to affect our philosophical view of their truth or falsehood" (p. 162).

It is certainly the case that, in such subjects as ethics, politics and theology, which are still subjects of controversy, a historical survey of the actual diversity and succession of human beliefs tends to beget a general scepticism as to the validity of any of the doctrines studied. Sidgwick admits that the tendency is natural, but he strongly denies that it has any logical justification. Historical study has no similar effects in mathematics or physical science or astronomy, fantastic as the opinions and methods of earlier *savants* now appear to us. It seems to be of the nature of things that truth grows gradually out of error. Hence even though demonstrably false opinions may be found among the

antecedents of some particular belief, they do not *prove* the falsity of the belief in question (though they may suggest it) unless they are put forward as reasons for holding it. The *destructive* effect of sociological inquiry seems therefore without warrant, but what are we to say of its *constructive* efficacy? The claim made apparently is that a study of the development of opinion yields the sole trustworthy criterion of truth. But is this the case? Let us suppose for a moment that we have ascertained completely the law of development of ethical, political, theological, or philosophical opinion so that we can state accurately the views which will be generally accepted by the coming generation. . . . "Suppose I foresee certainly that a belief will come, I cannot *therefore* conclude that it will be a true belief;" or in the case of an ethical belief, "the mere fact that I can foresee that it will come has no tendency to make me judge it good that it should come" (pp. 175-176). Moreover, in tracing the course of development in the past we cannot avoid treating it as a development through error to truth; but if we thus inevitably assume the truth of our own beliefs, further progress would seem to be a process from truth to error, and so the line of development in the past can hardly give us much insight into the nature of future advance.

Sociologists endeavour to meet the last difficulty by saying either that knowledge is 'relative' or that it is 'progressive'. Sidgwick has no difficulty in exposing the vagueness of the first reply and its untenability if strictly understood. If all knowledge is relative, then this one truth at all events is absolutely known—the truth, namely, that all truth is relative. "On this point, then, no further change seems possible, unless we suppose future humanity to lapse from knowledge into ignorance on this point. . . . But if no further change is possible, then surely, though in a different way, there must be a profound difference between the past history of belief, in which we trace the succession of generations pursuing absolute truth and mostly holding opinions—ethical, political, theological—conceived to be absolutely true, and the forecast of its future history, in which the pursuit and the consciousness of attainment can only be of relative truth" (p. 181). It is difficult to conceive the pursuit of truth going on at all under such circumstances. "The aim of attaining the true ethical or political ideal, the true view of duty and right and ultimate good, either in private conduct or the constitution of society, appears to me worthy of the sustained ardour and devotion which it has in the past actually aroused in philosophical minds: but I cannot imagine how any one should

Scorn delights and live laborious days

in order to pass from the relative truth of the nineteenth century to the relative truth of the twentieth, *supposing the latter to be not a jot more true or less merely relative than the former*" (p. 182).

The words which I have italicised formulate quite fairly the

position of a consistent Relativism, but they also lay bare the thorough-going scepticism which it involves. No one view is truer than another, so that the notion of truth entirely disappears. If we are to interpret the phrase 'relatively true' so as to avoid this scepticism, it can only mean that the knowledge or truth in question was 'the best approximation to knowledge or truth' attainable by the individual or period under consideration. Our knowledge, that is to say, is never complete; and, therefore, though true so far as we possess it, it is always subject to revision and modification through fresh discoveries and the attainment of a more comprehensive point of view. When the phrase is so understood, however, we may be said to pass from Relativism pure and simple to Progressivism—"the doctrine that the changes which history shows us in the prevalent beliefs of, let us say, our own society, exhibit a progress from less to more of knowledge and truth" (p. 196). But progress in knowledge implies the notion of an objective standard of truth, just as social progress or improvement implies some criterion of the good or the ethical End. In pronouncing any belief to be 'truer' (*i.e.*, a nearer approximation to truth) or any ethical practice or social state to be 'better' than another, we are making assumptions for which Sociology alone can furnish no justification. A purely historical or sociological survey shows us one phase of belief or practice following on another; it shows us the different causes at work producing the transition, but it gives us no canon for estimating their relative truth or value. In fact a consistent Sociology has no place for the notion of truth; it judges opinions solely from the point of view of their social efficiency. The only question it asks about any series of changes is "whether it tends continually to increase the social organism's power of preserving itself under the conditions of its existence" (205). The terms social 'welfare' and 'development' are often used by sociologists instead of, or along with, preservation, but I understand Sidgwick to argue that both these terms carry us beyond the bounds of pure Sociology. An organism adapts or adjusts itself to its environment and is so preserved, but this gives us no clue to 'the direction in which the series of self-adaptive changes is tending' and does not legitimate any conclusions as to 'development' or enhancement of 'welfare'. Progressivism is discussed (in Lectures x. and xi.) chiefly in connexion with social progress as the wider though vaguer notion. The discussion is fuller than that devoted to other topics in the volume, and the details are interesting, but it hardly seems to move with the same directness towards its goal. The main positions advanced are that even if we restrict ourselves to the idea of 'self-preservation,' many self-adaptive political changes may be pointed to which were not of advantage to the particular society in the struggle for existence. Progress in civilisation (in the arts of industry and peace, literature and the fine arts, etc.) may be a source of dangerous weakness in conflict with other social groups. And if we turn to the case of

beliefs there seems to be no evidence in the historic period of a clear general tendency in the changes to promote the preservation of the social organism in which they take place. Christianity, for example, did not preserve the Roman Empire. Mere preservation in short gives us no guidance and does not represent what is ordinarily understood by social progress. Illegitimate as it may be for the pure Sociologist, we cannot avoid having recourse to the notion of 'welfare,' and we must pass beyond particular societies to consider mankind as a whole. "We cannot, I think, measure social progress by any narrower conception than that of conduciveness to the welfare of humanity at large" (p. 216). The discussion of this ultimate End belongs to Practical Philosophy not to Sociology.

The concluding pages of the eleventh lecture contain a discussion of Comte's Law of the Three Stages. Admitting a large element of truth in the doctrine, if we are permitted for Theology and Metaphysics to substitute 'crude theology' and 'bad metaphysics,' Sidgwick points out that there can be no opposition between Theology and Science 'as soon as the Divine Will is conceived as a Will in which there is no caprice or irregularity and a Will whose order may without limit be investigated by human minds,' and there can be no real collision between Metaphysics and the sciences because they move in different regions and may be regarded as mutually complementary. Science is often supposed to be anti-teleological, but the sociological interpretation of the earlier stages of social development in the light of the later is eminently teleological; and in contemplating the advance of scientific knowledge (on which Comtian Sociology lays most stress) "we find ourselves irresistibly led to assume as real a completer knowledge, comprehending and going indefinitely beyond the imperfect and fragmentary knowledge possessed by human minds" (230).

The concluding lecture deals, as was indicated at the outset, with the problem presented by the divergence between 'what is' and 'what ought to be'. This is the fundamental problem of Rational Theology, whose task is "to bring our knowledge of what is into coherent relation to our systematic thought as to what ought to be, through the conception of God as a Being in whose righteous will what ought to be actually is" (p. 238). Anything like adequate discussion of this vast issue is naturally impossible in the six or eight pages devoted to it, and a review can do no more than note the general conclusions arrived at by an intellect at once cautious, intrepid and reverent. Rational Theology regards the laws of phenomena as a manifestation of divine ordering intellect, and the fulfilment of the rules of Duty as the realisation of the Divine Will. These Sidgwick regards as 'necessary assumptions for the religious consciousness,' but he does not consider that they really solve the problem, "since we inevitably ask why God's power does not cause the complete realisation of ideal Right". It may be argued that the divine

purpose can only be realised in beings endowed with Free Will, and that the possession of Free Will renders the admission of wrongdoing inevitable. In regard to Freedom Sidgwick maintains here the same balanced position as in the *Methods of Ethics*, but even if this argument be granted its full force, it only meets the question of moral evil—wrong free choice—and leaves the question of physical evil untouched. In regard to physical evil, he says, "I see no way of reconciling its existence with the goodness of God except by assuming that the Divine Will and Purpose work—like human will and purpose—under conditions. But in that case . . . the theological synthesis of 'what ought to be' with 'what is' seems to fail." Practical Philosophy itself requires the postulate of a Moral Order to reconcile the conflict between self-interest and duty. This postulate usually takes a theistic form, but we may believe in Moral Order without connecting it with personality, and, on the other hand, the chief abstract arguments used to prove Theism do not tend to prove moral order. "I myself regard Theism as a belief which, though borne in upon the living mind through life, and essential to normal life, is not self-evident or capable of being cogently demonstrated. It belongs, therefore, to a class of beliefs which I do not dispute the general reasonableness of accepting, but which I think have to be considered carefully and apart in estimating the grounds of their acceptance." Such beliefs—among which he mentions the principle of causality—may be called postulates; and if any such assumption is confirmed by the test of consistency with other assumptions and cognitions, its certainty becomes practically indistinguishable from other certainty. But in general "our acceptance of such propositions must have a provisional character, as compared with those that are self-evident or demonstrated". "The serious difficulty begins when such assumptions are divergent and conflicting. So far as this is the case, we must infer error in some or all of them, though we may believe the error to be useful, *i.e.*, better adapted than truth would be for the life of certain minds. But the postulates of A can have no validity for B, who does not feel the need of them; on the other hand, B's recognition of their necessity for A must lead him to philosophic doubt of the objective validity of similar postulates in his own case" (p. 243). One could have wished that this doctrine of postulates, admittedly open to abuse, yet so fruitful in modern philosophy, had been more fully treated. The above account tends perhaps to place the matter on too subjective a basis. There is a difference, no doubt, between a postulate and a self-evident or demonstrated proposition. But if it can be shown that the coherence of experience as a whole or of some important aspect of experience is bound up with the validity of a certain postulate, it seems only in a technical sense that we can speak of the postulate as being less 'certain' than some isolated piece of self-evident truth.

To return for a moment to the discussion of the Historical

Method, it must be admitted, I think, that Sidgwick completely makes out his case against the supposed supersession of Philosophy by History or Sociology. The determination of the ultimate End or *summum bonum*, and with that the establishment of ethical or political science, its vindication and definition, certainly belong to metaphysics and the theory of knowledge. No study of a series of facts in the past will supply us with the ethical point of view or dispense us from passing a direct judgment upon present beliefs and practices in accordance with the ideal of truth and goodness which we at present possess. But when the existence of ethical judgments at all has been explained and justified, it is perhaps well to remember that Sidgwick's argument does not suggest—though he himself would probably not have denied—the really transforming and vitalising effect of the historical method upon the specific content of the science. Any reader of the present volume who is in danger of forgetting this could not do better than read the two powerful articles on 'The Evolutionary Method as Applied to Morality' contributed by Prof. Dewey to the *Philosophical Review* during the past year, in which this function of history is convincingly vindicated.

A. SETH PRINGLE-PATTISON.

Personal Idealism: Philosophical Essays by Eight Members of the University of Oxford. Edited by HENRY STURT. London and New York: Macmillan, 1902. 8vo, pp. ix., 393. Price 10s.

THE eight authors of this refreshing volume are yclept Stout, Schiller, Gibson, Underhill, Marett, Sturt, Bussell and Rashdall. I call their book refreshing, first, because 'band-work,' always a cheerful sight, is peculiarly so in a field like that of philosophy where men are usually more given to stickling for their differences than for their points of union; second, because the style of most of the essayists is unconventional and enthusiastic—sometimes frolicsome even; and finally because the philosophy which the writers profess is a sort of breaking of the ice, and seems to promise a new channel where formerly the only pathways were Naturalism's desert on the one hand, and the barren summits of the Absolute on the other. Here we have Naturalism's concreteness without its lowness, and Absolutism's elevation without its abstractness, for human purposes, of result. The human person, according to these writers, shows itself, if we take it completely and empirically enough, to be a force irreducible to lower terms, and an origin both of theoretic perspectives and of consequences in the way of outward fact. "The current antithesis," says the editor, "between a spiritual philosophy and empiricism is thoroughly mischievous. If personal life be what is best known and closest to us surely the study of common experience will

prove it so. 'Empirical idealism' is still regarded as something of a paradox; I should like to see it regarded as a truism."

A re-anthropomorphised Universe is the general outcome of this philosophy, which on the whole continues Lotze, Sigwart, and Renouvier's line of thinking, although it is so much more radically experiential in tone. Being so experiential, it has to be unacademic, informal and fragmentary; and this, from the point of view of making converts, is a bad practical defect. What we need now in English, it seems to me, is a more commanding and all-round statement in classic style and generalised terms of the personal idealism which these authors represent. Mr. Schiller might compass it, if he would tone down a little the exuberance of his polemic wit—meanwhile we have these trial bricks, set in at separate points.

Mr. Stout's contribution is a subtle paper on "Error," in which the personal idealism is less prominent than in the other essays. "It is essential to the possibility of error that both the real being and its unreal qualification must be present to consciousness," says Mr. Stout; and he conveniently calls the real being, so far as it is present, the 'intent,' while he calls the qualification (whether true or untrue) the 'content' of the consciousness in question. The most interesting results of this distinction are certain developments of Mr. Stout's well-known conceptualism. By inadvertence or confusion, he says, we may think of a different object from that which we are really interested in knowing and consequently really 'intend'; and we may as a result qualify our intent wrongly. In empirical matter error is in this way always possible, but not so when we intend abstract objects as such. 'Whiteness as such,' for example, is a direct creature of our intent. We can tell by inspection whether its nature is or is not independent of such an attribute as triangularity. In so experimenting on our mental object we are active; but only in order that we may passively record the final result. This latter is true certainly and necessarily, for no other reality can have been intended than that on which the mental experiment was made. Thus there are limits set to the possibility of error wherever the whole object of our intent is unequivocally present to the mind. Mr. Stout makes application of this to Mathematical truth, and uses it to refute Bradley's dictum that all knowledge of 'Appearance' is infected with error.

Mr. Schiller's paper on 'Axioms as Postulates' is a radical one indeed. Starting from the fact that the world as we know it is a gradual construction reached by successive trial, the Author denies that even 'in itself' it is a datum ready-made. It takes its whole form from our successive experiments in shaping it. There is indeed a resisting factor, but the Aristotelian ὕλη is the best way in which to conceive of this. 'It is; but it *is* only what is made of it;' and we must conceive it as the funded accumulation of successful plastic operations performed by striving beings

of which we ourselves are the last to come. Slowly but surely, the world is forming itself according to demand. Mr. Schiller applies this evolutionary conception to mental categories as well as to physical facts, and boldly takes, as an example whereby to test his theory, the principle of identity itself. We postulated it because we needed it, and its 'truth' grew by the successful use we made of it. Practical activity came first and theoretic reason was secondary. Abstract identity, never found, had to be made as an ideal, and facts then found which ministered to it. Nature condoned our audacity.

"Human nature is thus the sole key to nature which we possess, and if it will not unlock the Arcana, we must resign ourselves to sceptical despair. . . . Hence the anthropomorphisation of the world is itself a legitimate postulate. . . . We never find out 'what a thing really is' by asking 'what it was in the beginning'. . . . What it is appears from what it *does*, and so we must study its whole career. We study its past to forecast its future, and to find out what it is really 'driving at'. Complete explanation therefore is by final causes, and implies a knowledge of ends and aims,"—among which are our own. Pure intellectualism is insufficient—philosophy is partly thought and partly deed.

The next paper is one on 'The Problem of Freedom,' by W. R. Boyce Gibson. The most important thing in this paper, it seems to me, is the distinction which its author makes between the two types of Psychology, the inductive type, which describes things from without, and the direct type which puts itself at the subject's or 'experient's' point of view. When we describe a mental phenomenon by its general 'conditions,' we methodically place ourselves outside of the inner attitude of the subject to whom the phenomenon belongs. The core of its individuality, as it exists in him, is the sense which it gives him then and there of tending to the fulfilment or non-fulfilment of some interest by which he is possessed. In this consciousness of furthering or being checked we seem to have the original of our ideas of activity and cause. To realise conscious facts in this way is to vitalise our theories about them. We de-vitalise psychology on the other hand, when we explain inner states by objective categories, whether of association or of brain-process, with the causal energy which they carry in them left out of our account. Psychology *need* in no way be guilty of this usual omission, for the active inwardness can be told-about and described as well as any other feature of the process, and treated moreover in our cosmic theories as a real cause. This sense of prosperous immanent activity in the individual moment of experience is what we mean by freedom, and according to Mr. Gibson, as I understand him, indeterminism of the future is not essential to the idea.

Of the next paper, 'The Limits of Evolution,' by G. E. Underhill, I find it less easy to give a summary account. It seems

in part to traverse Mr. Schiller's notion that everything may be considered as 'evolved,' for it insists that original data, laws, and relations must be presupposed in every evolutionary account. Moreover it ends by an assimilation of Darwinism to Aristotle's conception of final cause, and thus, at least by implication, makes teleology universalistic, whilst I understand most of the other essayists to admit, at any rate as a possibility, that the general teleology displayed by the universe may be a resultant of the several 'purposive impulses,' exhibited by its parts.

In Mr. R. R. Marett's important Essay 'Origin and Validity in Ethics,' we again meet with the distinction which Mr. Gibson drew. We can explain a moral judgment by the conditions under which it comes to be made, in other words by its 'origin'; or we can take the immediate feeling of 'validity' in it by which the subject of it is possessed. Both points of view are essential for completely understanding a given moral judgment. The more refined and spiritual senses of validity arise, according to the current evolutionism, as 'by-products' of preferences originally ministerial to biological need. Mr. Marett tries to show that, whatever their origin may be, they tend to become independent ethical forces, and in many cases to supersede the more animal preferences in which they are supposed to arise. They have so far *not interfered* with survival, and *prima facie* are as valid biologically as anything else. Nevertheless the two orders of judgment are connected with each other, and he who considers the more animally useful promptings alone may fall into an opportunism as coarse as the Quixotism is extravagant by which the devotee of purely spiritual validities may be swayed. Moreover those who use considerations of origin to criticise feelings of validity by, must in the end appeal to validities somewhere accepted by themselves, and the upshot of the whole discussion, characterised, it seems to me, by a very concrete sentiment of moral reality, is to vindicate the essentially tentative and experimental character of the whole ethical sphere of life. Standards as well as acts are established '*experiendo*,' the author seems to affirm.

Mr. Sturt's paper, 'Art and Personality,' is a well-written attempt to show that 'Art' as a personal activity in the artist is normally inspired by an enthusiastic objective interest in what expresses or seems to express aspects of personal character in man. This interest is not derived from other interests; and the validity of our artistic judgments cannot be based on any principles elsewhere derived. In the last resort the 'good' in art is what men individually so pronounce, though an individual's taste may be called abnormal if it contradicts a general consensus the other way.

Mr. F. W. Bussell, in 'The Future of Ethics: Effort or Abstention?' makes a weighty plea for the former alternative which, as the Judæo-Christian ideal, he contrasts with the

quietism and renunciation preferred by Greek naturalism and by Oriental pantheistic thought. In his emphasis upon the 'single life,' as against the requirements of a universal principle, he, like Mr. Marett, seems to show a sense for ethical reality. He reinstates personality, and makes of history a reality and no 'appearance'; and leaves the individual a co-creator, by his acts, of the collective order upon the possibility of which he casts his faith—at least so I interpret Mr. Marett's conclusions.

The final essay of the book, 'Personality: Human and Divine,' by Mr. Rashdall, has for its purpose to defend, against 'the Absolute,' the notion of an individual personal God who may conceivably be finite, and whose relation to created persons may not be that of includer to included. The Absolute, if we are to talk of such a thing at all, can only be the totality of Reality, the community of Persons, one of whom is God.

Such is the abbreviated indication of the contents of a work rich in style and exceptionally rich in ideas. I add no criticism —although I think that every essay calls for some objection of detail—because I think that the important thing to recognise is that we have here a distinct new departure in contemporary thought, the combination, namely, of a teleological and spiritual inspiration with the same kind of conviction that the particulars of experience constitute the stronghold of reality as has usually characterised the materialistic type of mind. If empiricism is to be radical it must indeed admit the concrete data of experience in their full completeness. The only fully complete concrete data are, however, the successive moments of our own several histories, taken with their subjective personal aspect, as well as with their 'objective' deliverance or 'content'. After the analogy of these moments of experiences must all complete reality be conceived. Radical empiricism thus leads to the assumption of a collectivism of personal lives (which may be of any grade of complication, and superhuman or infrahuman as well as human), variously cognitive of each other, variously conative and impulsive, genuinely evolving and changing by effort and trial, and by their interaction and cumulative achievements making up the world. Beginnings of a sincere Empirical Evolutionism like this have been made already —I need only point to Fechner, Lotze, Paulsen, C. S. Peirce (in the *Monist*), and to a certain extent to Wundt and Royce. But most of these authors spoil the scheme entirely by the arbitrary way in which they clap on to it an absolute monism with which it has nothing to do. Mr. Schiller, in his *Riddles of the Sphinx*, and more acutely still in various essays, has given to it a more consistent form. It is to be hoped that the publication of the present volume will give it a more mature self-consciousness, and that a systematic all-round statement of it may erelong appear. I know of no more urgent philosophic desideratum at the present day.

WILLIAM JAMES.

The Origin and Significance of Hegel's Logic: A General Introduction to Hegel's System. By J. B. Baillie, B.A. (Camb.), D.Phil. (Edin.), Lecturer in Philosophy at University College, Dundee. London: Macmillan and Co., Limited. New York: The Macmillan Company, 1901.

The two titles of this book characterise exactly the nature of its contents. We have in it a careful, conscientious study of the *Logic* of Hegel in its various phases of development, and an attempt to give an unprejudiced estimate of its permanent value. Three stages are recognised in the growth of Hegel's views of logic. The first extends from 1797 to 1800. Logic is here sharply differentiated from Metaphysics, but no consistent satisfactory account can be given of its function, because of the uncritical and tentative character of Hegel's system of philosophy at that time. During this period his interest was rather in religion than in philosophy. The change that came about in Hegel's attitude at the close of this period is "best described by saying that whereas formerly he had a religious interest in the object of philosophy, he has now a purely philosophical interest in the object of religion, the object in both cases being ultimately the same" (p. 60), *viz.* absolute reality. The second period (1800-1807) netted for Hegel as its results: "(1) the more complete grasp of his fundamental philosophical principle," that the Absolute is Mind; "(2) the ascertainment of the nature and procedure of the instrument of philosophising," which consists of a synthesis of reflexion and intuition (*Anschauung*); "(3) the closer approximation of Logic to Metaphysic, through the assimilation of their content; (4) the naming of the method to be employed in constructing a system," *viz.* the method of Development (p. 89).

"In order to understand the line of development which leads Hegel to the position which he finally adopts, and the reason which induced him to alter the views which he held during the period we have just reviewed," *i.e.*, the second period, "we must bear in mind the demands which from the first he expected philosophy to satisfy. These were that it should be the complete exposition of the knowledge of the Absolute, that the system of such knowledge should be determined by the inner connexion of its content, and that the nature of the Absolute should be shown to be Mind, Spirit (*Geist*). These are for Hegel simply assumptions, fundamental positions which must be held by those who would fulfil the task of philosophy. He does not seek to *prove* them at the outset; rather he takes the only possible proof of them to be the actual realisation of them by philosophy" (p. 119).

The exhibition of the Absolute as Mind is given in the *Phenomenology of Mind.* The Absolute as Mind "means that Mind is to embrace its object. It is not to exclude it (that would be Dualism); nor to negate it (that would be Solipsism); nor to be on a

level with it (that would be the Indifferentism of Schelling); it is to contain it in itself. This alone is Idealism. Now it was mainly to solve this problem and establish that position that Hegel wrote the *Phenomenology of Mind*. Such being the general nature of the problem which he has to solve, it is not difficult to see that to accomplish his purpose the inquiry will conveniently fall into two parts. In one part he will be exclusively engaged in showing that Mind, when and wherever we find it in relation to an object, is actually 'higher than' its object. . . . In such an inquiry there will be no need to confine attention to any one form under which this relation exists. Any and every form will have to be considered" (p. 140). "The further and second question is, What amount or degree of truth does each possess, what degree of intimacy is expressed by any given relation, how far does the object dealt with at any point realise or express the essential nature of mind, how far is the mind in dealing with the object explicitly aware of itself as being *in* its object, as being at one with it as well as its own self?" (p. 143). "Hence the inquiry is a historical analysis or analytical history of the kinds of truth of which the mind is capable;" or again, it "may be named a Constructive History of the forms of Experience"; or once more it "can be looked at as a Philosophical History of Consciousness"; or finally "as a Transcendental Psychology. All these various expressions merely indicate different aspects of exactly the same problem" (p. 145).

"Only one method of proof was open to him. For he held, on the one hand, that his own view was the absolutely true, and on the other hand, that the views of others were likewise true, but imperfect. His proof, therefore, had to reconcile both of these positions. And this was only possible by showing that the truth the other views contained was true by being a form or expression of his own, and was imperfect. . . . And on the other side he had to show that his own view actually and explicitly expressed the truth implied in the other imperfect views" (p. 150). The result is that "the only and complete content of philosophy will be the whole diversity of experience, which alone reveals, and where alone is found, the meaning and content of that Absolute which is the only object of philosophy". "Not merely does he [Hegel] maintain and preserve all finitude through and *by means of* the Absolute. The tendency of this new view even seems to be to do full justice to them *at the expense of* the Absolute itself" (p. 152). It is difficult to see how Dr. Baillie would reconcile this statement with the criticism he passes upon Hegel for "the elimination of the individual in the construction of the System" (p. 358). It would be worth while, had we space at our disposal, to examine this criticism in detail. It seems to be based upon a misinterpretation of Hegel's statement that the individual simply "looks on". Hegel does not thereby deny that the activity of the individual determines the philosophical result,

but merely denies that any *prejudice* or *caprice* of the philosopher interferes with his accurately stating the objective processes of the manifestation of the Absolute. Whether this denial is tenable or not we cannot here inquire; but at any rate the denial has not the reach that Dr. Baillie attributes to it.

The problem of the *Phenomenology* being to do justice to all concrete experiences, no sooner is it solved "than another problem will present itself for solution, a problem already implicit in the *Phenomenology* all along, but only becoming prominent at the end of that inquiry. If the unity of subject and object is the one essential reality in all experience, and if the modes of this unity are just the modes of experience, then does not the problem suggest itself to state in systematic connectedness the inner identities as such, the modes of unity *quâ* unity, which have been the ground reality throughout the whole of the *Phenomenology?* We have these various concrete relations of subject and object in experience; can we not proceed further to extract or abstract the inner kernel of ultimate truth exhibited and preserved by all the several moments of experience, by each relation of subject to object, and constituting it a necessary pulse in the life of the Absolute? There is in every mode such a vital essence, namely, the identity or unity, which is the ground of the connexion of subject and object in each case. And each such unity will be a specific truth, the ultimate truth, namely, of each mode. The complete system of such unities will of course cover the same area as that of the *Phenomenology*, namely, the whole of experience, the content of the Absolute. The only difference will be that whereas in the *Phenomenology* we have the concrete, actual embodiment of experience, in the other inquiry we shall have nothing else but the abstract, 'formal,' conceptual, 'pure' essentialities stripped of all direct reference to the diversity and tangibility of existent experiences, and expressed and connected in the form determined by their own character. The content of this new science being the inner reality of each mode of experience, and this inner reality being, as we saw, the principle of connexion of the various modes, it is further evident that the method which this new science will follow will be none other than that of the *Phenomenology* itself; it needs no other, and it can find none other. The only difference will be that the method will in this new science be exhibited in its ultimate and purest form; for here it is operating with and through a content which is itself 'simple' and 'pure'. But what else can this new science be but just what has been hitherto known as Logic? It will appear, and is indeed evident, that these vital essences can only be thoughts, notions as such; and these have been, and are always, the matter of Logic" (pp. 155-157).

In this passage we have a very clear statement of the relation of the *Phenomenology* and the *Logic*, and one that is borne out by a close study of these two works. The statement could hardly be

improved and gives a key to the problem of the nature of the categories treated by Hegel in his *Logic*.

In chapters vi. and vii., the important questions raised by the *Phenomenology* are treated in considerable detail and with Dr. Baillie's characteristic directness and intelligibility. Such questions are those concerning the method of procedure, the origin and nature of absolute knowledge, its content and its relation to other forms of experience. The point, elaborated in this discussion, that absolute knowledge is not omniscience, and is nothing but the knowledge by mind of mind's own principles of operation, is one that needs always be kept in view by readers of Hegel. A thorough appreciation by writers on Hegel of this significance which Hegel gives to the term 'absolute knowledge,' would have very sensibly diminished Helegian bibliography.

Merely passing reference can be made here to the excellent treatment of the notions of the Logic as at once concrete and abstract, as ideal and yet as real. We must hasten on to chapter ix. on the "Origin and Nature of the Method of the Logic". "The fundamental characteristic of the Method of the *Logic* is its necessary and essential identity with the content" (p. 256). "It is not difficult to see what is meant by this identity of content with method. In the *Phenomenology* it was established that mind was the determining principle in experience as a whole, and in each part of it. Experience, as it appears, is the unfolding of the actual life of Spirit in all its manifold forms. Now not merely in each form, and not merely, again, in the whole was mind present, but itself determined the process from stage to stage, itself made the transition from form to form, and *was that transition* as much as the forms into which it passed. But if so, then since the content of the 'System of Experience' was constituted by Mind, the connexion between its parts which made the system possible is similarly constituted. In other words, the *Phenomenology* is self-constructed and self-determined. It is one and the same mind which fashions the many expressions of experience into a single connected context, and which owns them as its experience. There is, therefore, no separation between the matter of the system and its mode of constitution. But it is clear from this that the method of construction must likewise pervade each part of the system as a part" (p. 257). There is therefore only one method from beginning to end, and this is true not only of the *Phenomenology* but of the *Logic*, for in both the method is the same (p. 261). This "*method is simply the inner activity of Mind itself*" (p. 259). The much discussed "transition" in the *Logic* "is the manner in which the moments of ultimate truth are built into the structure of Absolute Knowledge" (p. 262). "The truth which is the whole is not something over and above the truths of experience; it is simply the latter in their unity. The only way to construct the system of such notions is to show their essential connexion as expressions of one and the same mind, which both is the specific

notions as such, and itself is the movement from one to another. And this is done when the notions 'pass into' one another" (pp. 265 and 266). But "how exactly is the process brought about? What starts the movement? There is only one answer—the existence of opposition, discord, contradiction. All change, we may say, generally is due to disturbance of equilibrium within a given whole. . . . It is so in all concrete human experience. . . . Hence the antithesis between the fulness of its [mind's] completed life, and the insufficiency of any one special mode of it, both creates other modes in which it must realise itself and compels it to pass from a less sufficient to a more complete form of experience. This opposition, which operates perpetually throughout concrete experience, and is absolutely necessary to it . . . is the motive force which initiates and maintains the process of experience, and produces the continual conversion of conscious attitude (*Umkehrung*) which appears throughout it. And the process in Logic is similarly constituted" (pp. 266, 267). But this diversity of experience in the midst of its identity, this plurality in the bosom of unity, is what is meant by "negation" (p. 272). "Identity only has significance, only *is* by being set against difference; and difference has no meaning except in opposition to an identity. . . . to be *conscious* of self necessitates distinction, while to be conscious of *self* asserts an identity throughout the whole process" (p. 272). Hence "the method from first to last is at once synthetic and analytic; the difference between the moments is one of emphasis only. In the first negation we establish more directly by analysis of the original identity, a diversity implied in it. In the second we insist more particularly on the synthesis of the elements ostensibly opposed, and bring out their unity" (p. 276).

Dr. Baillie thinks that the term "'Dialectic' can hardly be said to exhaust the meaning of the method," because "the beginning is established by the method, and the beginning is not itself a negative"; because "the negative is only one aspect of the content; every notion is likewise positive"; and because "the process as a whole is a development, and a development is at least as much positive as negative" (p. 286). This criticism of the term by which Hegel generally preferred to characterise his method is valid only if the term is taken more narrowly than Hegel took it. For Hegel dialectic was *das Fassen des Entgegengesetzten in seiner Einheit* (*Werke*, Zweite Auf., iii., 42). The recognition of opposition and contrariety did not exhaust the function of Hegel's dialectic. This he regarded Kant's mistake in his conception of dialectic. Kant held fast by the abstractly negative side of the dialectic and in consequence reached the curious result that reason is not capable of knowing the rational (*Werke*, iii., 41, 42). Hegel objected strenuously to this conclusion, and denied the premiss on which it rests, namely, that dialectic is merely negative. Dr. Baillie takes dialectic to be

the recognition of differences, and objects to Hegel's calling his method dialectical, because that method involves the recognition of identity as well. Dr. Baillie is true to Hegel's thought; he is not true here to Hegel's terminology.

The Notes on "Contradiction" and "Development," appended to this chapter, are very clever pieces of exposition and argument, although one may not be willing to accept the statements in all points. The chapter on the "Relation of Logic to Nature" seems to solve a difficulty of long standing in the comprehension of Hegel's system.

The last chapter, "Criticism," shows that the expositor is also an able critic. Into the various objections he makes we cannot enter here. Some of them are without doubt well taken. Others seem to get their plausibility from overstraining isolated expressions. But these latter are not important, and the critic recognises this when he says that they do not "seriously damage the real value of Hegel's general position, or of the Logic in particular" (p. 363). "We shall find," if we look at the subject in the fuller light of Hegel's larger meaning, "that most of the objections urged against it above cease to hold, while at the same time much of his System as it stands can be accepted as tenable" (pp. 367, 368).

The book will not be altogether easy reading to a novice in the study of Hegel's philosophy; but it will be easier reading than Hegel's own works, as most expositions of Hegel have not proved to be. Like all really helpful and useful commentaries, it must be read along with the works commented on, and thus read it will prove to be not a keeping but a disclosing of "the Secret of Hegel". And even to one who has not had time or inclination to read the Obscure Philosopher *par excellence* of modern times, a careful study of this *General Introduction to Hegel's System* will show the nature and importance of Hegel's problem, the spirit in which he attacked it, and the partial success of his solution. Dr. Baillie's work cannot be too highly praised.

EVANDER BRADLEY MCGILVARY.

Mind in Evolution. By L. T. HOBHOUSE. London: Macmillan, 1901.

NOTWITHSTANDING some real divergence of opinion, and a much greater amount of apparent divergence due to differences in the usage of terms, there is a growing consensus of opinion among students of comparative psychology as to the main trend of mental development in animals and man. This is in part the outcome of a more careful, cautious and critical treatment of the recorded evidence, and in part the result of the application of the experimental method together with the appreciation of the fact that, if it is to afford data from which valid conclusions may be drawn, animal behaviour must be studied in the spirit of serious investigation.

Those who enter on the discussion of the subject in this spirit have to trace, so far as the conditions permit, a continuous process of mental evolution, and have also to distinguish and name the successive stadia through which this evolution passes. By some emphasis will be laid on the continuity of the several stages; by others on their differentiation. And the incidence of this emphasis will be reflected in the use of technical terms. The germinal and embryonic stages of abstraction and generalisation, for example, may be reasonably inferred from the behaviour of animals low down in the scale of mental progress. It is not unnatural therefore that, where continuity of process is in the focus of thought, the terms "generalisation" and "abstraction" should be employed with the widest possible range of significance so as to comprise both the embryonic and the fully developed phases along a specific line of psychogenesis. But on the other hand it is not unnatural that, when the differentiation of the stages is in the focus of thought, these terms should be severally restricted to the highest distinguishable phase of development—that at which the process in question reaches maturity. If the progress of thought depends now upon the perception of similarity amid diversities of manifestation, and now upon the distinction of delicate shades of difference, it is inevitable that the preponderance of the one or the other tendency should leave its impress on the language in which that thought is expressed. And where a writer is addressing not only the inner circle of experts but a wider audience of cultured folk, he has to consider the commonly accepted implications of the words he uses and, bearing in mind the fact that even the cultured reader will be more under the sway of these common implications than of the author's most careful definitions, he has to select that usage which will offer the least resistance to the general acceptance of his meaning, and best subserve further progress.

Mr. L. T. Hobhouse in his valuable work on *Mind in Evolution* distinguishes five stages of correlation in the course of what he terms "Orthogenic Evolution". This he defines as evolution "upwards," assuming at the outset, and contending throughout the work, that it is identical with the evolution of mind or of the conditions which make mind possible. "Doliogenic evolution," as contrasted with orthogenic, is "the growth of any other qualities whatever that assist survival". It must be remembered that Eimer (*Verh. der Deutch. Zool. Gesell.*, 1895) uses the terms "orthogenic" and "orthogenesis" for evolution through use-inheritance and the organic transmission of acquired characters, and therefore on the one hand with implications which Mr. Hobhouse's usage does not carry and on the other without the implications which his definition suggests. Dealing broadly with the adaptation of human and animal action to the requirements of life and growth, and using the term "adaptation" so as to include both racial adaptation, by means of natural selection or otherwise (to which it has been suggested that the term should be restricted),

and individual accommodation through modification of structure in the course of the life and growth of the organism, he finds that it involves "a certain correlation, to put it in the most general terms possible, between the experiences and the actions of the individual and of the race". The word "correlation" being thus used in a comprehensive sense, neither in its technical application in psychology nor with its biological implication, five stages are distinguished. The first, which stands in a category by itself, is named the *Pre-intelligent Stage* where response to stimulus is the outcome of inherited structure, where the correlation is not achieved within the experience of any individual, and where adaptation is confined within narrow limits. This stage, in Mr. Hobhouse's interpretation, only falls within the scope of orthogenic evolution, as defined, in so far as the conditions which make mind possible are then established. Instinctive reactions are its culminating products. Their nature and character, the co-operation, in their higher developments, of internal disposition—some form of craving or *stimmung*—with external stimuli to reflex action, and the criteria by which they may be differentiated from intelligent actions, are well brought out in the chapter on *Instinct* to which almost the only exception that can be taken is that Mr. Hobhouse in one passage seems to raise it to the power of a quasi-metaphysical faculty, when he says that the business of instinct is precisely to shape adaptable reflexes aright.

In placing instinct entirely in a stage termed Pre-intelligent, it would seem, however, that the co-operation of intelligence in the genesis of some instincts is excluded. It is true that Mr. Hobhouse clearly notes the practical difficulty of disentangling the factors in some forms of behaviour. "Intelligence," he says, "arises within the sphere of instinct; indeed, we can draw no sharp and certain line between them [as they occur] in nature. Yet in idea they are quite distinct. In so far as an act is instinctive, it is not intelligent, and conversely." But this does not preclude the origin of some instincts through lapsed intelligence. As used by Lewes and Romanes, the phrase "lapsed intelligence" carried with it a Lamarckian implication based on the direct inheritance of the intelligent modification as an instinctive congenital character. But it has recently been shown that (on the hypothesis that Prof. Mark Baldwin has termed Organic Selection) congenital instincts may arise along the same lines that have been marked out by persistent accommodation to oft-recurring circumstances through the exercise of intelligence; so that the origin of some instincts through "lapsed intelligence" may now be accepted without the Lamarchian implication of the inheritance of acquired characters.

Still, broadly considered, it remains true that within the sphere of instinct, but not directly from instinct, intelligence is developed, and that its development opens out new lines of progress. In the second of the two main categories, which Mr. Hobhouse distinguishes, the correlation is based on individual experience.

Under this head fall four stages of correlation: (1) that of unconscious readjustment; (2) that of concrete experience and the practical judgment; (3) that of conceptual thinking and will; and (4) that of rational system. In common with Prof. Wundt and Dr. Stout among psychologists, and with such students of animal life as Dr. Thorndike and Mr. Kinnaman, the author reaches the conclusion (to which we believe both Romanes and St. George Mivart, notwithstanding wide divergence of expression, would have subscribed) that "the highest animals have as much capacity for dealing with the practical exigencies of their surroundings as can be attained by an intelligence limited in its scope to the concrete and the practical". No doubt there may be some, perhaps much, difference of opinion as to what is psychologically involved in this limitation to the concrete and the practical as distinguished from the abstract and the intellectual. But quite apart from any discussion as to the psychological status of the higher animals the difference between what Dr Stout calls the perceptual and the conceptual planes of mental development is so well marked and so important as to justify their being placed in separate categories. We should therefore advocate three, instead of two, main divisions: I. The instinctive; II. The intelligent or perceptual; and III. the rational, intellectual or conceptual. Of these the second would be subdivided by Mr. Hobhouse into (*a*) the stage of unconscious readjustment and (*b*) that of concrete experience and the practical judgment. Whether *unconscious* readjustment is a satisfactory designation for the modification of response to stimulus as a consequence of *the pleasure or pain* immediately resulting, is questionable; but the implication is that there is no consciousness of the purpose or end of the modification. The chick that avoids cinnabar caterpillars as the result of experience, Dahl's spider which ceased to spring upon flies soaked in turpentine, and Möbius's pike of the sore nose, afford simple examples of the genesis of elementary experience through the subconscious correlation of sensory data. But how difficult it is to describe such rudimentary cases of the development of a conscious situation without using phrases which overstep the limits of legitimate inference. Möbius's pike, after dashing itself for three months against a glass partition in the attempt to get at some minnows, became, we are told, "at last *so persuaded of the danger of attacking them* that, when the partition was removed, it left them quite unmolested".

The transition from this stage to the next rests on the growth of experience in clearness and comprehensiveness. "In the primitive experience, the feeling modifies the sensation which it follows. Let the consciousness be extended so that sensation and feeling may be apprehended together while yet remaining distinct, and the content sensation-giving-place-to-feeling comes into being. This is the germ of the higher stage." "Psychologically, the new departure which has taken place in this stage is that the related

term which in the previous stage merely influences action, is now brought explicitly into consciousness." "We may describe the increased complexity by describing this stage as the correlation of relations, the one set being perceptual, the other practical. Both are essentially concrete, that is to say, we deal in this stage not with the relation as such but with two or more related objects of experience." The only point upon which I am not clear in these and some other passages is the statement that the related term is brought explicitly into consciousness. So many passages, like the last above quoted, state with much emphasis that the relations are only implicit in the concrete experience as a whole, and that it is in this sense only that relations can be said to be perceived by animals, that when we are told that their behaviour is in many cases determined by the relation between itself and the end to be gained we may take it that the author's view is that the animal does not make explicit and focal to consciousness the relation as such between means to be employed and end to be attained, and that there is nothing of the nature of intentional correlation. If this justly expresses his opinion I am in complete agreement with the spirit of his interpretation and do not think that anything I have written conflicts in spirit with his own conclusions.

Mr. Hobhouse has not been content to rely on second-hand information concerning the behaviour of animals. He has conducted careful and well-devised experiments to test the mental capacity of dogs, cats; a seal, an elephant, and two monkeys, a Rhesus and a chimpanzee. Did space permit these latter might be profitably compared with those of Dr. Thorndike and Mr. Kinnaman. On the whole, making due allowance for the personal equation, the results of taking the monkey into the psychological laboratory are remarkably concordant. And Mr. Hobhouse would agree with Mr. Kinnaman's statement that: "In these experiments, as in Dr. Thorndike's, there appeared no case that could be interpreted as reasoning in the higher senses of that term". Animal behaviour, when submitted to serious investigation, is thus, so far as present inquiry has enabled us to form an opinion, restricted to the practical and the concrete, and is limited to what Dr. Stout calls the perceptual plane. In this general conclusion there is essential agreement. Differences of opinion very largely centre around the use of terms, and modes of stating the common interpretation.

Desirous of laying emphasis on the continuity of mental process Mr. Hobhouse, for example, discusses his stages of correlation in terms of the syllogism. The chick on the basis of yesterday's experience *infers* to-day that the cinnabar caterpillar will, if seized, be nasty, and is therefore to be avoided. "Inference is essentially one function, from the simplest case of the chick, up to the highest elaboration of experience by the human intellect." The first stage of intelligent correlation "is comparable to a syllogism in which

the conclusion only should be an explicit content of consciousness," "the premisses being represented by a certain combination of psychological forces from which the conclusion follows". In the second stage "the process of correlation is comparable to a syllogism in which minor premiss and conclusion are avowed, while the major premiss is suppressed," being "represented by the psychological effect of past experience, which makes the mind draw its inference". The third stage—that of Conceptual Thinking and Will—"is comparable with the completed syllogism with explicit major premiss; and comparing it with the preceding stage, we see that the pervading identity which was there the central feature of the inexplicit 'process' has now passed over into the recognised 'content,' leaving outside those general methods and assumptions of thought by which the universal and all other products of intelligence [intellect] are built up". Finally on the last stage—that of Rational System—we have "the apprehension of the principles and processes underlying thought—the process of thinking made conscious. This is the process implicit in all the preceding stages, and in bringing it into consciousness so that the whole of the 'thought process' now passes into one content, the reasoning of this stage is as a syllogism in which the assumption involved in syllogising should be taken into account."

How far this syllogistic treatment of the whole range of mental process from the little-differentiated embryo to the mature logical form is helpful, and how far it is likely to lead to misconceptions, must be a matter of opinion. Bearing in mind, as I have already said, the fact that even the cultured reader will be more under the sway of the commonly accepted implications of logical terms than of the author's most carefully guarded definitions, my opinion is that the danger of misconception outweighs the advantage due to unity of treatment. Logic as a normative science belongs especially to the last stage. It deals with the apprehension of the principles and processes underlying systematic thought and formulates ideal standards and tests of correct thinking. For logic, major premiss and conclusion, generalisation and inference, are correlative terms; each implies and is dependent on the other; without the other each, as such, is non-existent. For those to whom this conception has become part of their mental furniture, the statement that for Möbius's pike any sort of "conclusion" is an "explicit content of consciousness," the premisses being represented by "a certain combination of psychological forces from which the conclusion follows," involves an uncomfortable sense of nightmare. One has to reorganise one's conceptions on a new basis. And freely as one admits that an author may, within limits, frame his own definitions of the terms he employs, one may question whether he can reasonably expect his readers to remodel their thought to suit his convenience, or has cause for complaint if his real position is misunderstood.

But I would not take leave of Mr. Hobhouse in a spirit of disagreement with his work. It is a good honest and straightforward work, full of careful analysis and well-digested synthesis. It will well repay reading and re-reading; for there are many good points, well taken and well put. And, certain modes of statement apart concerning which there may be differences of opinion, its conclusions are in my judgment sound at the core.

C. Lloyd Morgan.

Psychology Normal and Morbid. By Charles A. Mercier. Swan Sonnenschein & Co., 1901. Pp. 512. Price 15s.

Of the general aim of this book every psychologist will heartily approve. Dr. Mercier tells us that his purpose is to deal with normal psychological processes in the way that shall be most helpful to students of the abnormal, because "Insanity is no exception to the rule which requires a knowledge of the normal as an indispensable preliminary to a knowledge of the abnormal". He tells us also that "The reason why the contrary opinion has been maintained with such vigour, and the contrary practice so generally followed, has seemed to me to be the absence of any work in which normal psychological processes are dealt with from the point of view and for the purposes of the alienist". We may be allowed to question the sufficiency of this reason for the unsatisfactory state of the study of insanity in this country, and to believe that its causes are less simple and somewhat deeper lying and that a complete remedy will hardly be effected by the publication of this book, admirable though it is in design and in execution. There are those who believe that the only way by which improvement can be brought about is by some change of system that shall make it worth the while of a considerable number of medical men to become thorough students of psychology both normal and morbid, and that the most important step towards this end would be the institution of a diploma in psychiatry by some body of the highest academic standing, such as the University of London. The way in which such a diploma may be expected to effect this much-needed reform cannot be set forth here, and it must suffice to point to the very great improvement in the study of sanitation that has resulted of late years from the institution of the Diploma of Public Health.

This book gives us the mature reflexions of an able and independent thinker upon an immense range of subjects treated under the headings Sensation, Thought, Volition, Memory, Pleasure and Pain, Subject-consciousness. Although, as we have seen, it is designed to remedy the scanty psychology of the average alienist of this country, it may also be regarded as a symptom of the unsatisfactory state of psychological study in general. The present reviewer has heard it said by a very distinguished continental

psychologist that the great need of psychology is to get rid of the big books. This may seem a hard saying, but the truth implied is that what is most needed is not the expression of the opinions of every thinker of any originality on all the problems of psychology, but rather the close and detailed study of narrowly defined problems by individual workers; that the definite and final establishment of one grain of psychological truth is a more desirable product of years of strenuous labour than a large volume filled with the reflexions and opinions upon a great range of topics of an author, no matter how able he may be.

The treatment of 'Sensation' is naturally brief. The section on Thought makes up nearly half the volume. Of this section the most valuable part is that which treats of delusion, which is defined as 'the spontaneous alteration of the cohesion of a relation without the aid of experience'. It is laid down that 'alteration and exaggeration of emotion precedes delusion,' and the interesting suggestion is made that the underlying structural change is of the nature of a 'parasitic mechanism' and may come about 'by the independent and quasi-parasitic formation of nervous connexions, which may take place during sleep, and which are not necessarily attended by any mode of consciousness.' A classification or scale of delusions, according to the degree of departure from the normal, is suggested and should be of practical value to the alienist. In the earlier part of this section on 'Thought' Dr. Mercier has ont held fast (it may be doubted whether he has grasped) the distinction between logic and psychology and is led into some prolonged discussions that can hardly be regarded as an essential part of the book. It would hardly seem to be necessary at this time of day to slay again the syllogism as a normal reasoning process and to investigate the mortality of Socrates once more. We may agree with Dr. Mercier's statement that the underlying principle of the syllogism and of all axiomatic reasoning is the assimilation of relations, but when he tells us that "It is one of the most curious anomalies of human faculty that Mill should have attributed to the syllogism the establishment of relations of coexistence and non-coexistence" one is tempted to remind him that "there are nine and sixty ways of constructing tribal lays, and every single one of them is right".

The section on 'Volition' begins with a definition of Attention—"with the emission of motion from the highest nerve regions occurs the corresponding mental state of attention"—"When the amount of incoming motion is great in proportion to the amount evoked and emitted upon its reception, then the intensification of the sensation is slight, the awareness of activity is slight, and then the Attention is termed Reflex Attention. When the amount of motion evoked by stimulus is great in proportion to the stimulus, then the intensification of Sensation is great, and the awareness of activity is great, and then this awareness is termed Voluntary Attention." This is in the last degree unsatisfactory; in the first

place, it is not true and, in the second place, if it were true it would be very far from being an adequate definition of reflex and voluntary attention. Having made this false start the section proceeds somewhat chaotically throughout. Volition is defined as 'an exaggerated degree of Attention,' and the author loudly challenges the world to show that there is any 'element in Willing beyond Thinking and Attention to the thought reached'. The author's statements are very far from the truth, for it is a more nearly true general statement that volition and attention vary inversely in degree at any moment, that when attention is at a maximum volition is at a minimum. Every one knows that voluntary or willed attention is but a poor substitute for the spontaneous attention evoked by the interest of the subject-in-hand. All the confusion of this section arises from the fact that the author has failed, like most others, to seize the essence of the willing-process. The answer to his oft-repeated demand for a demonstration of an essential mark of the willing-process has been given perfectly clearly by Dr. Stout in his *Manual of Psychology* and, perhaps, by him only:- "In voluntary decision special conations and their ends are first considered in their relation to the total system of tendencies included in the conception of the Self". "It is the conception of the Self as agent which makes the difference." How great a clarification of psychological writings will result when authors, undeterred by the fear of the transcendental Ego, accept and strictly adhere to this definition, theoretically so simple and clear, although in practice the application of it may be difficult in a large group of cases. Dr. Mercier does but follow a too common practice in treating under the head of 'Voluntary Action' all action that is not merely reflex or 'automatic'. But between reflex and voluntary action comes the immense group of conscious actions in which the conception of the Self plays no part as a determining factor. Let such actions be called conations, ideo-motor and sensori-motor actions, but let us reserve the term 'voluntary' for willed action, for action that is in some degree determined by the conception of the Self. At present the usual practice of authors is to treat of willed or voluntary action, properly so called, under the head of 'conduct,' the term voluntary action having been improperly used to cover all kinds of conation above the level of the reflex and the 'automatic'.

There are other instances of unsatisfactory use of language, as when (p. 482) 'Justice' is said to be 'an emotion of late origin,' and on page 357 Honesty and Justice are said to be instincts, while on page 328 we are told that 'Instinct is, on the physical side, an inherited mechanism replete with motion'. So 'Justice' becomes "an inherited mechanism replete with motion".

We are told (pp. 304-306) that at a certain level of animal evolution consciousness comes in as a factor influencing nervous changes, and on other pages occur statements of similar import; but it is not possible to feel certain whether these imply a development of

Dr. Mercier's views since the time when he wrote the *Nervous System and the Mind*, or are merely instances of loose writing.

One other important section calls for criticism, the more because in this instance, as in that of 'voluntary action,' the author does but exaggerate an absurd mode of treatment common to many others. He accepts the perfectly sound Spencerian dictum that pleasureable activities are in general beneficial to the organism while painful processes are harmful; but then, not content with this, he attempts to show that all pleasurable action involves a preponderance of assimilative or anabolic processes, that the pleasure is in fact the direct psychical expression of this preponderance of anabolism. And when any one of the many striking instances to which the rule will obviously not apply occurs to him, he casts about for special explanations. As to the seat of these anabolic processes he is entirely vague, but his general treatment of the subject implies that they occur within the central nervous system if not in other tissues also. What then shall we say of the child that joyously romps until it falls asleep tired out? Here we have perhaps the most intensely and continuously pleasurable form of activity known to us resulting in exhaustion. All physiologists will agree that in the metabolic processes underlying this activity and especially in those of the nervous and muscular systems katabolism vastly preponderates. No doubt the ultimate effect is usually an increased growth of tissues, but this comes later chiefly during the period of unconscious sleep; but even this consequent preponderance of anabolism does not always occur. A child, or indeed an adult, may wear itself thin and overtire its nervous system in pleasurable activities. The fact is that there is no evidence throughout the whole range of physiology that anabolic processes can determine any form of bodily or mental activity, any setting free of energy, and any such result of anabolism in the animal body is in the highest degree improbable.

This treatment of pleasure and pain is but a special instance of a fault that recurs frequently throughout the book. The author, while disclaiming any intention to treat of physiological processes yet frequently uses such phrases as "this is because a mechanism has filled up with motion and discharged itself," or "Sensation corresponds to the reception of motion by the highest nerve regions," or "when motion is impressed upon the animal organism, motion is released from it". All this is ultra-Spencerian. There may be no appreciable degree of error implied in such phrases but the amount of enlightenment conveyed is equally small. And it is surely a fault that, no one could gather from these pages any hint of the very great increase in our knowledge of the anatomy and physiology of the nervous system brought by the last thirty years. In conclusion it must be said that, in spite of these defects, the book has the great merit that in all its parts it is clearly the product of much vigorous and thoroughly independent thinking.

W. McDougall.

VIII.—NEW BOOKS.

Philosophy and Life; and other Essays. By J. H. MUIRHEAD, M.A., Professor of Mental and Moral Philosophy in the University of Birmingham. London: Sonnenschein & Co. Pp. 274.

A PREFATORY "Author's Note" states that "of the first series of Essays in this volume, about one-half have already appeared in the *Fortnightly Review* and other journals; . . . they were all written in the first instance as lectures for various more or less popular societies". Their titles are: "Philosophy and Life," "Professor William Wallace" (as man and as thinker), "R. L. Stevenson's Philosophy of Life" (a very striking and suggestive appreciation), "Abstract and Practical Ethics," "What Imperialism Means," "The Science of Poor-law Relief," "Modern Methods of Temperance Reform," "A Liberal Education," "Psychology and Education". The remaining papers—four in number—are philosophical in the technical sense of this word: they are reprinted partly from MIND and partly from the *Proceedings of the Aristotelian Society*: "The Place of the Concept in Logical Doctrine," "The Goal of Knowledge," "Hypothesis," "Is Knowledge of Space *a priori?*" They are all interesting and suggestive, full of material for thought and discussion; but we can allow ourselves only a brief comment on the first two of them. The author maintains that there is a sense in which the *concept* is really prior to *judgment*; that "the beginnings of knowledge must be looked for in a concept or form of apprehension which, like the undifferentiated continuum of the psychologist, may be said to contain in itself the possibility of all differences, but to hold them as yet in solution, awaiting the distinguishing, crystallising action of the logical judgment to give them at once a separate place and coherent connexion in the whole" (p. 204). Pursuing this line of thought, he describes the goal of knowledge as "a concept or mode of apprehending the world in which the processes of differentiation and integration have been brought to completion in a fully articulated system of coherent judgments". This use of the term *concept* certainly avoids one difficulty in the doctrine that judgment is the reference of an idea "to Reality"; but, passing from this point, it seems to the present writer that Prof. Muirhead's discussion of the fundamental question to which these lead up suffers from the presence of an unproved and undiscussed assumption. What is the relation of the ideal of knowledge to ultimate reality? In answering this question it is assumed that we are shut up to a choice between two alternatives: the view of Mr. Bradley and Mr. M'Taggart, that there is an alien element in Reality which even an Absolute or complete knowledge could never embrace; and the contrary view of T. H. Green and the Master of Balliol, that "a complete knowledge of the conditions of the possibility of an object would be equivalent to the reality of the object". Is the choice only between

agnosticism on the one hand, and, on the other, an attempt to conceive Reality as consisting in "relations of relations of relations of . . . and so on to infinity"? If we suppose that the distinction of Sentience (Hegel's "Immediacy," Mr. Bradley's "Feeling") and Intelligence holds, not only "in psychology" but in reality, of every level of experience, are we merely reviving the Kantian antithesis of Sense and Thought? These questions are at least possible subjects of discussion.

S. H. Mellone.

The Functional versus *the Representational Theory of Knowledge in Locke's Essay.* By Addison Webster Moore. University of Chicago Contributions to Philosophy, vol. iii., No. 1. 1902. Pp. 67.

There is a fundamental paradox about knowledge which consists in the fact that in proportion as it becomes practically more reliable it grows theoretically more doubtful. And so we finally have the philosopher, *e.g.*, Mr. Bradley, mournfully deciding that unless we can know everything we can really know nothing, and that strict truth remains the inaccessible preserve of an Absolute. Meanwhile the actual knowers in the workshop and the laboratory are working with the practical knowledge, which the metaphysician finds so indigestible, and ever giving us more and more control over our experience. Prof. Moore finds that the source of this paradox lies in the fact that practical and scientific thinking is purposive, and in aiming at certain concrete results uses its methods as means, whereas in epistemological analysis these processes are taken in abstraction from their actual function and so reduced to inanity. Thus 'analysis' in epistemology becomes something wholly different from what it was in science: in the latter an 'element' was whatever served as a means to get the result; in the former the problem is to find an eternal structure which exists independently of us and our efforts to know it. Only if such a completed system of reality could be found and we could obtain a precise transcript thereof, would our knowledge be valid, certain and necessary. As no knowledge can be found to satisfy these *a priori* demands, such a 'theory of knowledge' is bound to end in scepticism. But the English thinkers, with their healthy sense of fact, always in their practice operated with the 'functional' theory of knowledge, whatever theoretical homage they felt bound to pay to the scholastic ideal of a pure thought divorced from action. Bacon demanded a knowledge which should be power, though he could not disabuse himself of the idea that it was to be had for the mere *looking.* In Hobbes, Locke, Hume this struggle between the antithetical criteria of knowledge continues, and all the contradictions and confusions in Locke's theory in particular are shown to arise from this source. This latter point Prof. Moore studies carefully and in detail, and to my thinking establishes conclusively. Altogether the clearness with which he makes his point and the pertinacity with which he sticks to it, constitute his monograph a refreshing advance on the ordinary run of Ph.D. theses, and render it a valuable and important contribution to that pragmatist revision of the whole current theory of knowledge which is now beginning, and in which it is satisfactory to find the Chicago philosophers, under the auspices of Prof. Dewey, prepared to co-operate. Prof. Moore gives chapter and verse for Prof. James's dictum that the true critical method can best be found by working out the suggestions contained in the English tradition in philosophy.

F. C. S. Schiller.

Fragments in Philosophy and Science, being Collected Essays and Addresses. By James Mark Baldwin, Ph.D., D.Sc., LL.D., Stuart Professor in Princeton University. New York: Charles Scribner's Sons, 1902. Pp. xii., 389. Price $2.50 net.

Prof. Baldwin explains that these papers, twenty-one in number, have been brought together in one volume because they are related to larger topics which he has treated more systematically (or will so treat) in separate works. And certainly their chief interest rests on the light they throw upon doctrines that their author has developed elsewhere. They do not form a collection of popular essays in philosophy, for many of the papers are highly technical, and many of them almost obscurely curt. Nor do they appear to develop or even to illustrate any single central idea; indeed, their heterogeneity is artificially emphasised by an arrangement which leads us from 'Philosophy and Life' through 'The Cosmic and the Moral' to 'The Memory for Square Size,' and thence, again, through a discussion of "The 'Type-theory' of Reaction" to 'The Psychology of Religion'. The more technical papers here reprinted are already so well known that they do not demand separate mention. With regard to the others, expectation is aroused by the opinion expressed in the Preface that our ultimate view of the world must be æsthetic rather than logical or ethical, and it is disappointing to find that after all they rarely touch on this topic. In the essay on 'Philosophy and Life,' Prof. Baldwin argues that, in a general way, and when historically interpreted, the effects of a philosophical theory on life are a legitimate test of its validity, and similarly in another essay on 'Theism and Immortality' he maintains that the demands of our æsthetic and of our moral consciousness have as just a claim to satisfaction as those of the intellect. This is valuable, of course, as against the philosophies which refuse to take any but intellectual postulates into consideration at all; but Prof. Baldwin scarcely tries to meet the argument that philosophy is an intellectual discipline and that within its own province the intellect must be allowed supremacy. Other articles are on 'The Idealism of Spinoza,' 'Recent Discussion in Materialism' (containing some interesting criticism of Bain, Wundt and Maudsley), 'Psychology, Past and Present,' and 'The Postulates of Physiological Psychology'. That on 'The Psychology of Religion' is suggestive, but a little unsatisfactory. Concentrating attention on religions as organised in society, it almost disregards the religious experience itself, and tends to find the value of religion only in its external effects as a conservative factor in social progress and as a prop to morality.

T. Loveday.

Proceedings of the Society for Psychical Research. Part 41, 1901. Pp. 649. Part 44, 1902. Pp. 275.

The first of these volumes contains a further investigation of the phenomena connected with Mrs. Piper's trances, in the shape of detailed reports and critical discussions by Prof. Hyslop, of Columbia, of sittings in which the chief communicating intelligence professed to be his deceased father; the second is similarly made up of the experiences of Sir Oliver Lodge, the late Mr. Frederic Myers, Dr. F. van Eeden, Dr. Hodgson, Mr. J. G. Piddington, Mr. "Wilson," Miss Alice Johnson and Mrs. Verrall, with an English psychic, Mrs. Thompson. Neither series perhaps contains anything quite so striking as Mrs. Piper's "G. P." communications (*Proc.*, pt. 33), but Prof. Hyslop's full discussion of the question of

interpretation is notable (with its conclusion in favour of the spiritistic hypothesis), as are also his experiments on the modes of recognition used by communicators who had to establish their identity through telegrams, without giving names. By this most ingenious method Prof. Hyslop was able to show that the general character of the communications was very similar to those proceeding from trance-mediums, and that very slight and apparently trivial indications were effective in leading to recognition, so that their use by the supposed 'spirits' seems quite consonant with normal human psychology. To the evidence itself it is impossible to do justice in an abstract; its effect is necessarily cumulative, and all that can be said is that these volumes add materially to a mass of carefully recorded and digested evidence which *ought* (one would have supposed) to have excited widespread scientific interest. And yet, outside the S. P. R., there is as little indication of any serious determination to investigate the matter as there was twenty years ago, and less than there was fifty years ago, and so even reports like the present pass unread and unheeded. It is true that our knowledge of these phenomena is still in its rough beginnings, that their interpretation is still disputed, and that upon any view they present difficulties as yet unsolved. But why do not these very features, as in all other subjects, attract, rather than repel, attention and research? The explanation would seem to be that no real scientific desire to know has yet been aroused with regard to such phenomena, and that, until it has been, the utmost that the labours of psychical researchers can expect is neglect.

F. C. S. Schiller.

The Cambridge Platonists. Edited by E. T. Campagnac, M.A. Oxford: Clarendon Press, 1901. Pp. xxxvi., 327.

This is a volume of selections from Benjamin Whichcot's *Select Sermons and Aphorisms*, John Smith's *Select Discourses*, and Nathanael Calverwell's *Discourse of the Light of Nature*, together with an introduction and index. It is a pleasant book of very pleasant writers, and the introduction is well written. Although it omits Ralph Cudworth and Henry More it is a useful complement to the second volume of Principal Tulloch's *National Theology in England in the 17th Century*. The Cambridge Platonists do not lend themselves easily to selection, and the editor has wisely confined himself to complete specimens, and complete specimens of Cudworth are overlong.

Diffuse, digressive, pedantic though most of the Cambridge Platonists were; though they lived in backwaters and kept aloof from the great political and ecclesiastical controversies of a grasping and distracted age; though they devoted themselves to the revival of an ancient philosophy overlaid with fantastic assertions and in any form singularly alien to the English temperament and singularly remote from practical issues, yet their influence was rather practical than intellectual. It was their elevation of character, sweetness and charitableness of disposition, sincerity and unselfishness, which chiefly appealed to their contemporaries and appeal to us now. They graced manners and religion more than they advanced philosophy, and their graces still blossom in the dust of their ponderous learning. In many respects their labours invite comparison with the latest attempt to base a philosophy of religion on a revived idealism which is associated rather with Oxford and Cambridge. The writers in *Lux Mundi*, like the Cambridge Platonists, make the 'spiritual element in knowledge' the starting point for the vindication of responsibility in action and faith in religion. Both schools stake too much on

a precarious theory of knowledge, and in both cases the superstructure seems to rest loosely on the foundations, rather than to grow out of them.

The Elements of Mind, being an Examination into the Nature of the First Division of the Elementary Substances of Life. By H. Jamyn Brooks. London: Longmans, 1902. Pp. xviii., 312. Price 10s. 6d. net.

This product of "a fortuitous train of thought" purports to be a new theory of mind, and is a tragi-comedy of good intentions.

T. Loveday.

Histoire et Solution des Problèmes Métaphysiques. Par Charles Renouvier. Paris: Alcan, 1901. Pp. ii., 477.

In this volume the venerable *doyen* of French philosophers aims at giving in full his reasons for the judgments on the work of his predecessors and *confrères* which he expressed in his recent *Dilemmes de la Métaphysique pure.* It is not, therefore, a history of philosophy so much as a suggestive discussion of that history, intended to lead up to the formulation of the essential problems as M. Renouvier conceives them, and to exhibit the necessity of the solutions he has offered in his *Neocriticism.* He has accordingly added a statement (in thirty pages) of his doctrine, and this will probably be found to be generally convenient for purposes of reference, on account of its lucidity and brevity and the information it gives as to the historical development and philosophic affinities of the doctrine. One cannot read it without being impressed by the author's profound knowledge of the history of thought, by the pertinacity with which he seeks to draw attention to his solutions of difficulties to which philosophy after philosophy has succumbed, and by the noble faith in the victory of truth which the experiences of a long life do not seem to have uprooted.

And yet M. Renouvier must be a disappointed man. For his doctrines have never yet received the attention which their intrinsic merits and his earnest advocacy of them deserved. The infinitism, the monism, the determinism, against which he has been arguing for fifty years, appear to be as uncritically rampant as ever in the utterances of professional philosophy, while theology seems as distracted as ever by the necessity of choosing between the incompatible doctrines of a Divine Personality and an all-dissolving All which it is dimly conscious must ultimately deny to the religious appetites any real satisfaction. Why, then, have M. Renouvier's labours had so little effect? is a question which his reader cannot but ask, and to which his book must surely contain the answer.

It would not be sufficient to answer that M. Renouvier has adopted the alternative which is less popular with philosophers; he has also pressed for a decision on questions of which no rational decision was desired. For the incompatible doctrines, between which humanity has halted with a patience surpassing that of the exemplary ass of Buridan, are at bottom emotional postulates, and as such will be held *together* so long as the conflicting desires sustain them. It is possible also that in this case the ass has not really had any but a slight and spasmodic appetite, nor has yet been convinced that a decision was really a vital necessity. But other reasons also may be adduced which are more closely connected with M. Renouvier's literary personality. He is not a brilliant writer, and style still counts for much, especially in France. He is free from pretensions: he does not envelop his philosophy with the

charm of mystery by promising wonders to the faithful, and then retiring into the cavernous convolutions of a thought which none can really follow. There is no romance about the clear, dry precision with which he makes his points, and in the light of his manner even his more romantic doctrines, *e.g.*, his doctrine of the Fall, only look grotesque. It must be admitted also that some of the pillars of his system seem somewhat unsubstantial. His Libertarianism does not seem satisfactorily founded upon a mere act of faith, even though it proceeds from a rational perception that neither freedom nor its negation is demonstrable. His doctrine of faith itself, excellent as are the remarks it leads him to make (*e.g.*, on pp. 94-95) as to the necessity of its intervention in the making and sustaining of every judgment, might have been immensely strengthened by a systematic illustration of this truth from every field of human knowledge. Even his great doctrine of Personality seems, similarly, to lack a definiteness and concreteness which might well have been supplied by tracing the omnipresence of personality in every act and thought and the impossibility of really dispensing with it anywhere. His choice of a name also was perhaps unfortunate; from a *Neocriticism* one would expect neither the novelty nor the constructiveness which his work undoubtedly possesses. But perhaps the whole truth is that M. Renouvier has been neither novel nor constructive *enough;* he has allowed himself to be hampered by excessive respect for philosophic tradition and the historic formulation of philosophic problems. But the great man in philosophy, as in the other pursuits of life, is not one of the Diadochi who carries on a stereotyped tradition: he is the maker of new values and the importer of fresh thoughts. Academic philosophy in all ages has shown that mere erudition will not keep thought alive, and that persistent inbreeding speedily results in debility and death. But upon the cross-fertilising of philosophy by the new suggestions which are crowding in upon it from the sciences (especially biology and psychology) M. Renouvier appears to have bestowed but little attention, although it is probably from these sources that will come the evidence which will finally persuade mankind of the general soundness of the *Weltanschauung* which he champions.

F. C. S. Schiller.

Études de Psychologie. Par J. J. van Biervliet, Professeur à l'Université de Gand. Paris: Félix Alcan, 1901. Pp. 201. Price 4 fr.

This volume is made up of four articles reprinted from various psychological magazines. By far the most valuable of them is the first, "L'homme droit et l'homme gauche," which was first published in *La Revue Philosophique* for 1899. Its object is to show that dextrality and sinistrality are characteristics of two distinct types of men, and that we must include under these terms, not only ordinary right-handedness and left-handedness, but also an asymmetry of the body generally, and a greater acuteness of the sense-organs on one side or the other. Ambidextrous persons the author does not believe to exist, though it is just possible that in women the preponderance of one side over the other is less marked. The first part of the article deals with asymmetries of the motor system. The results arrived at by direct measurement, both of skeletons and of living bodies, are not altogether concordant, but it seems clear that the skull of the "*droitier*" is, like his brain, more developed on the left side, and that the bones of his right arm exceed those of the left in length, circumference and weight, the opposite being the case with the left-handed, who form, perhaps, about 2 per cent. of mankind, or, at any rate, of western peoples. The same asymmetry is found as the

result of weighing the muscles of the two halves of the body, and the general conclusion is supported by the reports of tailors, glovers, etc. In the second part the author discusses the asymmetry of the nervous system. He experimented first on the relative strength of the two hands. The dynanometer being unsatisfactory, inasmuch as it measures, not only force, but also skill, he eliminated the latter factor by using as his test a form of work to which both hands were equally unaccustomed. The subject was blindfolded, a weight was attached by a metal thread to the corresponding finger of each hand, and the weights were then lifted simultaneously three times in rapid succession. In the case of right-handed subjects, the right weight was kept constant, and the left varied, until subjective equality was attained; conversely with left-handed subjects. From these experiments M. Biervliet concludes that the ratio between the strength of the two hands is constant, at any rate among adult men, being as 10 : 9 in favour of one hand or the other. Further, a series of experiments on auditory and visual acuity, and on the tactile sensibility of the hands, led to the remarkable result that in these respects also the superiority of one side over the other may be expressed by this same ratio (*cf.* the later work of Toulouse and Vaschide upon the relative olfactory acuteness of the two nostrils—*Rev. Philos.*, 1900). The third part of this essay is concerned with asymmetries of function, more especially with the tendency of men and animals in motion to deviate from the straight line; and, finally, M. Biervliet discusses the origin of asymmetry. He does not profess to offer any satisfactory explanation. The theory which lays stress only upon exercise and acquired habit he, of course, rejects, nor does he regard dextrality or sinistrality as hereditary, except, perhaps, owing to 'a mechanical influence,' *viz.*, uterine conditions affecting the fœtus. (In that case, they would be inherited from the mother only, a point which might surely be settled by collection of statistics.)

The remaining essays in this volume are of minor importance. They deal with (1) Optical Illusions, (2) Illusions of Weight, and (3) Circulation and Cerebration.

T. Loveday.

Bibliothèque du congrès international de philosophie. IV. Histoire de philosophie.

This volume, which contains papers of varying interest and importance on the history of philosophy, is appropriately opened by a few words from M. Boutroux on the object and method of the study. As was to be expected, he contrasts the sound method of interpreting each philosopher from himself with that of the *marche-à-reculons* or *Krebsgang*, which interprets all earlier systems in the light of the most recent, and has, therefore, the inconvenience of requiring a fresh application by each generation. Most of the papers are historical in the true sense, and some of them are real contributions to our knowledge. It is, of course, impossible to discuss them separately in a brief notice. Some of them would require a very full discussion indeed. This, however, is of little consequence; for practically everything of value in the volume either has appeared, or is to appear, in another form, and will receive full consideration in that way. Here it is only desirable to note certain striking features of the collection as a whole, which may be significant of the general tendency of these studies. In the first place, it is noteworthy that the papers on ancient philosophy are decidedly superior in originality and value to those on modern. In

the second place, the problem which receives the freshest treatment is the Platonic question, which has assumed an entirely new aspect in the light of the most recent researches. The final solution is hardly to be found here yet; but the papers of M. Couturat and Prof. Ritchie show clearly enough the direction in which the question is advancing. Special mention must be made of a paper by Prof. Berthelot of Brussels on the conception of mathematical physics from Plato to Pythagoras. This is inspired by Milhaud, who was in turn inspired by Tannery, and marks a distinct progress in a line of thought which the French have made specially their own, and which is clearing up a great deal that was formerly obscure.

Most of the papers on Modern Philosophy are by *professeurs de philosophie* in French *lycées*. They are excellent pieces of work, and their inclusion in this volume gives us a very favourable idea of the new spirit and method which animates the teaching of the subject in France. No country in the world has so many professional teachers of philosophy; for philosophy does not elsewhere form part of the regular course in secondary schools. It may, therefore, be expected that the value of France's contribution to philosophical literature will be very largely increased in the near future. The prospect of this opened up by the present volume is really its most striking feature, and serves to justify its existence as a part of the recent exhibition.

JOHN BURNET.

Le dieu de Platon d'après l'ordre chronologique des dialogues. Par PIERRE BOVET. Genève: Kündig, 1902.

This is a dissertation presented to the University of Geneva for the degree of *Docteur ès lettres*, and is an extremely able piece of work. M. Bovet has taken up the problem of Plato's theology afresh in order to ascertain what light is thrown upon it by the results of recent researches on the chronology of the dialogues. He has also examined the views of God to be found in earlier Greek philosophy. In this part of his work, he has not, I think, done full justice to the fact that almost all the early philosophers called the one world or the innumerable worlds in which they believed by the name *θεός* or *θεοί* as the case might be. This is not a purely poetical habit on their part, though it may be going too far to call their naïve cosmologies by the name of pantheism. He is right, however, in holding that none of the earliest thinkers deduced the idea of God from his theory of the world or had recourse to it in order to explain that theory. He is also right in holding that the idea of God has no place in Plato's earlier philosophy strictly so called. In particular, the Form of the Good cannot be identified with God. He is also right in maintaining that Plato's later theory of the soul as the cause of movement led him to formulate for the first time in the history of philosophy the conception of a God who is the source of all motion and the creator of the world No one who follows the argument can hesitate, in my opinion, to accept these conclusions, and they are of capital importance for the history of philosophy. Studies of particular points, such as the present, in the light of the now generally accepted views as to the chronology of Plato's dialogues, are what we need most in our efforts towards a satisfactory solution of the "Platonic question".

JOHN BURNET.

Les Timides et la Timidité. Par le Dr. Paul Hartenberg. Paris: F. Alcan, 1901. Pp. xv., 264. Price 5 fr.

The least fortunate part of this book is, perhaps, the Introduction, in which the author claims for his work that it is an essay in scientific psychology, and explains that he means by this the study of the functions of the brain! As it turns out, however, this prepossession does not greatly affect his work; in general he simply takes the line of the supporters of the Lange-James theory, which is accepted without criticism and without any attempt to show how it can be reconciled with his further position, that the affective life is prior to the intellectual and is irreducible. Chapter i. deals with the definition of timidity, which is regarded as a combination of false fear and false shame *in the presence of other human beings.* In chapter ii. the constituent emotions, fear and shame, are discussed, and the symptoms of Timidity itself minutely enumerated. Unfortunately it has as yet proved almost impossible to subject pure cases of this emotion to experimental examination. The third chapter is an interesting, rather than a scientific, sketch of the Character of the Timid. Quotations from autobiographical writings such as those of Rousseau are, perhaps, admissible, but it is difficult to defend the frequent references to, and excerpts from, works of fiction. For the rest, Dr. Hartenberg largely follows Dugas. The fourth chapter treats of the evolution, etiology, and varieties of the emotion. As to its etiology the author does not arrive at any very definite result. We are not much informed by learning that the basis of timidity is an inherited 'affective hyperæsthesia'. Even granted that the term is legitimate, we are no nearer a solution of the problems why the timid are disturbed by the presence of human beings only, and why their disturbance expresses itself in exactly these or those bodily alterations. Apparently, Dr. Hartenberg holds that 'every definite emotion is represented in the cortex by a definite group of cells' (p. 39), and that this explains the definite physiological concomitants (or constituents, as he would say) of the emotion. But he has already told us that timidity is a composite emotion. Do the 'cellular groups' fear and shame overlap? And, if the Lange-James theory is true, are these centres sensory or motor or both? Dr. Hartenberg returns to works of fiction. The treatment of varieties of timidity is chiefly concerned with the '*trac*' of actors, singers, etc., of which a full and interesting account is given. There follows it (chapter v.) an excellent discussion of pathological cases, and a final chapter on the practical treatment of the timid. Scattered throughout the book are many acute and suggestive remarks, and several rather doubtful ones.

T. Loveday.

La Mimique. Par Édouard Cuyer, Peintre, Professeur suppléant d'anatomie à l'École nationale des Beaux-Arts, Professeur à l'École régionale des Beaux-Arts de Rouen. (Bibliothèque Internationale de Psychologie Expérimentale). Paris: Octave Doin, 1902. Pp. 366. Price 4 fr.

In this volume the author offers us a treatment of a difficult subject which, though very complete so far as it goes, is far from being comprehensive. He approaches his subject too exclusively from the standpoint of the anatomist and too little from that of the psychologist. It is characteristic of his method that the first chapter, entitled "La Mimique du Langage" only occupies two pages, of which one is devoted

to a representation of the deaf-and-dumb alphabet. Similarly the historical chapter ii., admirable within its limits, gives no account of any work later than Darwin's, except for a few quotations from Tissié. In no place (and this is the great defect of the book) does M. Cuyer develop a general theory of those expressive movements with which he deals; he follows here Gratiolet, here Duchenne, here Darwin, and does not seem to perceive the difference between the method of symbolic interpretation which is proper to æsthetic and that of genuine psychological explanation. On the other hand, as a book of reference for points of detail his work is extremely valuable. The third chapter deals with the anatomy of the muscles employed in facial expression; it is clear, and, like the rest of the work, well illustrated. The fourth chapter is the most important. It is headed "Analysis of expressive movements". Each muscle that serves to express feeling is taken in turn, the changes of expression due to its activity are described, and the particular feelings determined with which these changes by themselves or in combination with others are connected. The fifth chapter is synthetical, *i.e.*, it takes the emotions separately and describes the correlated movements of expression. A few remarks on the relation of the subject to the fine arts end the volume.

T. Loveday.

Eduard von Hartmanns philosophisches System im Grundriss. Von Dr. Arthur Drews. Heidelberg, 1902. Pp. xxii., 851.

On 23rd February, 1902, Eduard von Hartmann completed his sixtieth year. In accordance with a graceful German custom it was intended that the present volume should appear on that day as a birthday offering to the eminent philosopher whose system it unfolds; but at the desire of the publisher—who must be a rather exceptional type—it came into the world some months earlier. An introductory memoir recounts the principal events in a life almost entirely devoted to thought. The son of an artillery officer, Hartmann entered the Prussian army at a very early age without having passed through a university training. An accident, the effect of which was aggravated by injudicious medical treatment, obliged him to abandon the military profession at nineteen, and his life has been more or less that of an invalid ever since. He then tried painting, music, and to some extent poetry, but without success, and finally found rest in philosophy. Cynical critics have attributed his adoption of pessimism to these repeated disappointments; but a better explanation is applied by the immense vogue of Schopenhauer during the early sixties in Germany. As a metaphysician, at any rate, Hartmann was no failure. His *Philosophy of the Unconscious*, published in 1868, achieved, for a work of its kind, a success without precedent or parallel, and brought its author offers of a professorship from three German universities. Ill-health prevented his profiting by an opportunity which has not been repeated, his declared antagonism to Christianity counting as a disqualification for academic preferment in the subsequent period of reaction. Hartmann has followed up his brilliant juvenile performance by several other contributions to speculative literature of a more special and technical character; but they have added nothing essential to the ideas of that grandiose philosophical romance, nor have they enjoyed anything like the same popularity. Indeed his general reputation has declined considerably during the last quarter of a century, being more and more obscured by the rising fame of Nietzsche; and one object of Prof. Drews, who writes as an ardent disciple, is to revive it. The present

drift of German thought is, he thinks, favourable to such an enterprise. After the neo-Kantian school has come a neo-Romantic movement, and why should not this in turn be succeeded by something like neo-Hegelianism? In point of fact Hegel is beginning to attract some attention, even in Germany, thanks largely to Kuno Fischer's recent volume; but his system is too much out of touch with modern science to suit our present needs (a word to the wise at Cambridge and elsewhere!). On the other hand modern science is too dispersive, too fragmentary, permanently to satisfy our deepest cravings. And here is the *Philosophy of the Unconscious* ready to fill up the gap: why not then accept it, at least provisionally?

Even a pessimist may be too hopeful; and Prof. Drews, though presumably a young man, has, I think, mistaken his age. The stream of tendency that once gave Hartmann's philosophy such vogue is rapidly sweeping it into oblivion. To begin with it is based on pessimism, and pessimism is out of date—whether overcome by Nietzsche or by Edmond, Rostand or by Browning matters little in the present connexion. Enough that the will to die survives only among belated elderly mediocrities or among Italian *veristi* who ought rather to be called *falsisti*. Whoever doubts this need only be referred to the most modern literature, especially the new poetry of Germany, France and England, or to the later as compared with the earlier utterances of our older poets. Hartmann is himself of course a sort of optimist, combining what he is pleased to call evolutionary optimism with eudæmonological pessimism. But long words set no bones. To say that pleasure without pain is the only ultimate value, and that life yields, from the nature of the case indeed must yield, a large surplus of pain over pleasure, is to pronounce life not worth living. But Hartmann finds the value for it in a sort of transcendent altruism, and that is what he calls evolutionary optimism. Our lives, he tells us, are, so far as they go, the predestined means of liberating the Absolute from the unspeakable torment of an everlastingly unsatisfied will, the creation of finite worlds being a wholly inadequate outlet for the infinite will of willing. For the longer the process of evolution goes on, in other words the more voluminous and intense consciousness becomes, the more acute and hopeless must be the sum total of suffering until a conviction is borne in on the cosmic will that the only hope of relief lies in the determination to unwill itself, in self-annihilation. This surely is pessimism of the deepest dye—much blacker than Schopenhauer's. And it can hardly appeal to those who have convinced themselves that volition is in itself a source not of pain but of pleasure. Nor does it seem a very promising foundation for morality and religion. Your genuine pessimist will hardly submit to an increase of misery for himself and for those whom he loves in order to redeem a highly problematical God from a still more problematical hell. He will see him—left there first.

If Hartmann's theory of life is out of date still more so is his metaphysics. Even a third of a century ago there was a singular audacity in reviving the speculative methods of Schelling and Hegel; and the tendency of criticism since then has been to discredit them, if possible, still more deeply. When we find a serious writer gravely reported by a serious interpreter as saying that 'the Logical creates space by setting the single dimension of time at right angles to itself' (p. 815), our first impulse is to dismiss the book as better fitted for notice in the pages of our esteemed contemporary MIND! than in our own, our second to consider the case in connexion with the psychology of a dreamy recluse living in the society of an adoring wife.

In this instance, adoration is not limited to the domestic circle. Prof.

Drews looks on Hartmann as the greatest of all philosophers, the Bismarck of speculation. Perhaps the resemblance goes deeper than he thinks. Bismarck was before all things an intriguing diplomatist, a master in the art of securing alliances and of setting declared or suspected enemies by the ears. In like manner Hartmann is always playing off the intellectual tendencies of the age against one another, or cleverly combining them in the semblance of a new synthesis, pessimism with evolution, mechanical with teleological causation, Hedonism with self-devotion, religion with materialism. And he interprets nature itself as a result of the same intriguing policy. Reason, without any power to act, sets Will at variance with itself, and is thus conducting it to final self-annihilation. But the weapons of Prussian statecraft are ill-fitted for the investigation of truth, being apt to break in the hands of those who use them for that purpose. Nor can such pure abstractions as 'Will' and 'Reason,' or 'the Logical' be set to do the work of concrete realities, even when they are wired together by a third abstraction and labelled 'The Unconscious'. Even such a phantasmal occupation as 'setting time at right angles with itself' implies activity and will. And the world-will, to be convinced of its unreasonableness in wanting to be, must have some reason after all (see Beauty and the Beast). But if so it would never have begun to be, and we should have been spared all this misery. The only real necessity for anything of the kind was that the *Philosophy of the Unconscious* should be written—and that was only a necessity for its author.

It would be rash to limit the possibilities of proselytism in a country which has produced Hartmann and Prof. Drews. But from a mere English point of view this ponderous volume would seem unlikely to increase the reputation of its hero. As an expositor the author is not to be compared with Kuno Fischer; indeed for clearness and elegance his style is much inferior to that of the master whom he has undertaken to interpret. Some sections, particularly in the second half of the book, are made nearly unreadable by the extreme condensation of the ideas and the uncouth phraseology in which they are clothed. And where the meaning comes out more clearly the system can only lose by having its self-contradictions brought closer together and exhibited in a more glaring light.

A. W. Benn.

Psychologie des Willens zur Grundlegung der Ethik. Von Hermann Schwarz. Leipzig: Wilhelm Engelmann, 1900. Pp. vii., 391.

Mr. Schwarz's standpoint is that of Voluntaristic Apriorism, and involves two main tenets: (1) The independence of the will; (2) The authoritativeness of the act of choice. These, in the author's opinion, constitute the indispensable corner-stones of Ethical Theory. Our author's first effort is accordingly directed towards proving by close psychological analysis the independence of the will. This thesis he supports by showing that approval and disapproval, the pure original acts of will, do not, like pleasure and pain, vary in quality; nor do they vary in strength or intensity; they vary only in a way that is entirely *sui generis*, *viz.*, in degree of saturation. In complete consistency with this thesis of the independence of the will, Mr. Schwarz insists further on its 'objectless' character. The will is indeed directed towards certain values, is not directionless, but these values are not its objects. And yet these primitive acts of will, though *sui generis*, are not unmotived. The first part of the present book is in fact devoted to elaborating

under three heads, the Natural laws of the will, laws according to which the movements of the will are determined.

The second part deals with the Normal laws of the will, and centres round the conception of choice or preference. Here, again, Mr. Schwarz's main endeavour is to show that choice or preference are not acts of Reason or Judgment, but acts of Will. Preference is a volitional act governed by normative laws, laws, that is, which guide us in determining what is better and what is worse. It may be either analytic or synthetic. In the case of analytic preference all we do is to *sanction* the better course; in the case of synthetic preference we *dictate* it. Such dictation becomes imperative when we have to decide between values of different orders. In every such act of preference our decision is regulated by two principles, the one bidding us love our neighbours better than ourselves, the other bidding us love ourselves better than our pleasures. These principles do not merely ratify rules held good before, but provide out of their own normative essence an entirely new conception of what is the better. The distinctions of moral worth which they make originate from themselves. In a word, they create morality. The study of Ethics, as our author conceives it, is based on these two laws. As based on the one, it becomes the Theory of Moral Self-Assertion; as based on the other, the Theory of Moral Self-Denial.

Restricting our criticism to an essential point, we may question whether our author's concern to secure the authoritativeness of the laws of synthetic preference by making them authoritative in their own inalienable right is really well-advised. The ultimate question 'Wherein consists the sanction of these ultimate laws?' is a question that will not be put by. Must we not ask, 'What is the end towards which human nature by its very constitution is destined to strive?' and is not this end the ultimate standard of action rather than the bare fiat of certain solemn irresponsible laws?

The main gap in this striking work is the author's neglect to consider in his criticism the standpoint of modern Idealism, and yet Mr. Schwarz displays at every turn keen critical capacity. He has also the constructive gift; his distinctions are fine, his illustrations numerous and excellent. The *Psychologie des Willens* is the work of an earnest and gifted thinker; it is stimulating and suggestive, and can be cordially recommended. It is a first instalment. Mr. Schwarz promises us the *Ethics* to which this Psychology is but the prelude.

W. R. Boyce Gibson.

Experimentell-Psychologische Untersuchungen über das Urtheil. Eine Einleitung in die Logik. Von Dr. K. Marbe, Privat-dozent der Philosophie in Würzburg. Leipzig: Engelmann. 1901. Pp. 103. Price 3 m.

The author rightly emphasises the fact that logical treatises at present contain a large quantity of psychological matter, much of which is too often the result of very casual introspection. What is by nature psychological ought to be examined without prejudice under conditions which ensure accuracy of observation, and these conditions he has attempted to attain in certain investigations upon the Judgment. He does not confine this name to true or false propositions, but regards as a judgment any mental process which can be characterised as correct or incorrect (*richtig oder falsch*). This assumption determines his whole procedure. Not only sentences can "become judgments," but words,

ideas, gestures, and indeed any mental processes. The question therefore arises: Can we discover any experiences which constantly accompany processes that "become judgments" and lend them their character as judgments? Dr. Marbe used as subjects two skilful observers (Prof. Külpe and Prof. Roetteken), induced in them a large number of judgment-processes, and registered the results that they obtained by introspection. He comes to the conclusion that there are no constant concomitants—or, as he rather rashly puts it, "no psychological conditions"—of judgment. But was it to be expected that the characteristic of judgment should lie in something extrinsic to it? The author apparently started by supposing that this might be the case because any experience can "become a judgment". But supposing this to be true, what does it imply? Later on, Dr. Marbe says that any experience becomes a judgment when the subject intends it to "agree with other objects". This is scarcely satisfactory, since he does not explain what is meant by "agreement," but in any case we have got beyond the initial idea or whatever it may be, for (1) we have a fresh attitude on the part of the subject, and (2) the "other objects" must also somehow enter into the judgment. The fundamental confusion is very apparent when Dr. Marbe examines what he calls "judgment-ideas". The subjects had (1) to lift two weights successively and turn the heavier over; (2) to whistle the note given by a tuning-fork; (3) to glance at three sheets of paper and fix their gaze on the brightest. We are told that (1) "the activity of turning the weight," (2) "the reproduction" of the note, and (3) the fixation of the paper, may all be correct or incorrect and are therefore ideas which become judgments. But these activities are certainly not merely ideas, and it is at least unusual to call them judgments. And for whom are they correct or incorrect? For the outside observer, or for the subject himself? Again there is a difference between the second and the first and third cases. In the second, the subject must first imitate the note, and may then perhaps judge his imitation correct; in the first and third he must judge one weight heavier or one colour brightest, and then behave in the required manner.

T. Loveday.

Psychologische Grundlegung eines Systems der Werttheorie. Von Dr. Josef Clemens Kreibig, Privatdocenten an der K. K. Universität zu Wien. Wien, 1902. Pp. 204.

Another Austrian work on the psychology of the theory of Value! Happily it is a comparatively short one this time. It is divided into eight parts. The first is a general introduction, giving a preliminary survey of the phenomena of value, and indications of some of the leading points of view. The second is on the psychology of feelings of value, and on general laws of value. The third deals with the psychology of the will in relation to value. The fourth is on the self-regarding aspect of value, including the foundations of Hygienics. The consideration of economic values comes under this heading. The fifth part deals with the other-regarding aspects of Value, and includes the foundations of Ethics. The sixth deals with the more impersonal (*ergopathisch*) aspects of value, including the foundations of Æsthetics. The seventh deals with formulas of value, and the eighth with the bearings of the theory of value on education. The work as a whole is interesting and suggestive, but can hardly be called masterly. The division of values into self-regarding, other-regarding, and impersonal seems somewhat crude; and no adequate attempt is made to justify it.

J. S. M.

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IX.—PHILOSOPHICAL PERIODICALS.

Philosophical Review. Vol. xi., No. 3. **J. E. Creighton.** 'The Purposes of a Philosophical Association.' [President's address to the American Philosophical Association, 1902. Philosophers have been largely occupied with the history of their science, and have neglected personal intercourse and co-operation. Knowledge of the history of philosophy is essential, but the history is intelligible only when read in the light of present-day problems; and personal meetings tend to bring historical studies into closer and more intimate relation to one's own philosophical standpoint. Co-operation means fruitful work and sanity of outlook, as well as encouragement to the individual. Overtly and consciously, the purpose of a philosophical association should be to promote and encourage original investigation and research. It will thus help to remove two common reproaches made against philosophy: that its representatives are lacking in scholarly devotion to their subject, and that it is barren of practical result. As for the relation of philosophy to natural science, "philosophy has to humanise its facts, to look at them from the standpoint of complete and self-conscious human experience".] **W. A. Hammond.** 'The Significance of the Creative Reason in Aristotle's Philosophy.' [Aristotle's theory must be derived from his general epistemology, from the meaning which he gives to 'form' and 'matter,' from the development of the Socratic-Sophistic controversy regarding conceptual and perceptual knowledge, and from special passages of the *De Anima* and the *Analytics*. His position mediates between the ultra-sensualism of the Sophists and the ultra-rationalism of Plato: the gulf between subject and object is bridged by the immanence of rational forms in empirical reality.] **W. M. Urban.** 'The Relation of the Individual to the Social Value-series.'—II. [The introduction of the concept of complementary values into modern value theories promises to extend the range of quantitative conceptions to the explanation of purely inner personal values. But (1) the principle adopted by the economist-moralists to account for the phenomena of personal sanction, and for the absolute moment in the personal series, is not quantitative but æsthetic and qualitative; (2) the ideal personal values that arise in the working out of the qualitative law of the individual series have the absolute moment only in the æsthetic isolation of the personality; they are more or less indifferent from the standpoint of the social series; and (3) the indefinite development of these personal values is so far independent of the social values and their mutations, is so much a function of the personality, that it may be realised irrespectively of the phenomenal content derived from the sphere of social values. How, then, do the moments differ out of which the value-function arises in the two spheres? In the different rôle played in the two cases by the negative factor. "The difference between internal and external oppositions lies in the fact that, while in the external oppositions

of social forces . . . both moments in the opposition are in reality positives, and from the abstract quantitative point of view, either of them may be looked upon as positive or negative, in internal opposition . . . the positive is always an organised system of volitional tendencies, in opposition to which the negative is . . . a group of scattered particulars."] **H. N. Gardiner.** 'Proceedings of the First Meeting of the American Philosophical Association, Columbia University, New York, 31st March and 1st April, 1902.' Discussion. **I. King.** 'Prof. Fullerton's Doctrine of Space.' [The Berkeleyan doctrine does not recognise or admit a real space such as Fullerton sets up over against perceptual space; the division is made only to escape absurdities in the Berkeleyan view. Nor are the two varieties of space necessary or permissible in any consistent theory. Kant meant by space the form, or law, of intuiting, as well as the product, or intuited space. It is the former element of which Kant thinks when he says that space is represented as an infinite given quantity. He may be wrong in using the term representation: but what he says must be interpreted in the light of his general standpoint, and not as if it were the teaching of a realist.] Reviews of Books. Summaries of Articles. Notices of New Books. Notes. **R. C. Robbins.** 'Prof. Royce's Refutation of Idealism.' [Critique of Montague's paper in the January number.]

Psychological Review. Vol. ix., No. 3. **J. Dewey.** 'Interpretation of Savage Mind.' [Comparison as currently employed is defective in three ways. It is used indiscriminately and arbitrarily; the haphazard selection yields only static facts; and the results reached, even if accurate, are loose aggregates of unrelated traits, not a coherent scheme of mind. We must look at the savage positively, not negatively, as a system of lacks and absences of capability. And we may best classify by occupation. Take, *e.g.*, the hunting life of the Australians. Here "want, effort, skill and satisfaction stand in the closest relations to one another; . . . immediacy of interest, attention and deed is the essential trait of the nomad hunter. . . . The hunting life is of necessity one of great emotional interest, and of adequate demand for acquiring and using highly specialised skills of sense, movement, ingenuity, strategy and combat." This mental pattern is carried over into all the relations of life, and becomes emotionally an assimilating medium: witness art, religious observances, practices in death and sickness, marriage customs. It is upon such a ground-pattern, then, that further genetic psychology must build.] **G. S. Fullerton.** 'The Atomic Self.' [The plain man is usually ready to maintain (1) that the mind exists within the body; (2) that it acts upon matter, and is acted on by matter; (3) that it is a substance with attributes; and (4) that it is non-extended and immaterial. The first three propositions look on mind after the analogy of a material atom; this view of mind is a semi-materialistic survival of ancient materialism. The fourth proposition, which makes the plain man's belief inconsistent, embodies the scholastic revolt against materialism. If stress is laid upon this fourth proposition the positive content furnished by the first three appears to be blotted out.] **S. de Sanctis** and **U. Neyroz.** 'Experimental Investigations Concerning the Depth of Sleep.' [Record of experiments upon normal sleepers and psychopaths, by aid of a modified Griesbach æsthesiometer; determination of subconscious reaction and of waking point. The maximal depth of sleep occurs in the first half of the second hour. The curve follows in general a descending course, but exhibits marked oscillations, with a maximum and minimum for each hour of sleep. There are, however, individual variations.] Discussions and Reports. **H. H. Schroeder.** 'Posthypnotic Suggestion and Determin-

ism.' [There is no valid reason for believing that there is any difference between the volitional process in 'ordinary' volitional action and that in the action performed under posthypnotic suggestion. To the subjective consciousness there is, as a rule, no such difference; and where a difference is felt, it can be satisfactorily accounted for by regard to the circumstances under which the introspective testimony is apt to be right or wrong. Hence posthypnotic experiments strengthen the position of the determinist.] Psychological Literature. New Books. Notes.

American Journal of Psychology. Vol. xiii., No. 1. **H. C. Stevens.** 'Studies from the Psychological Laboratory of the University of Michigan. V. The Relation of the Fluctuations of Judgments in the Estimation of Time Intervals to Vasomotor Waves.' [The vasomotor wave coincides, in at least 50 per cent. of the author's experiments, with fluctuation in the judgment of a time interval. For intervals above 3·7 sec. the strain of respiration may be employed as an aid to estimation. The method of single reproduction tends to lower the indifference point. Intervals below 0·40 to 0·70 sec. (the limit differs with individuals and methods) are overestimated; intervals from this point to 2·40 sec. underestimated; intervals from 3·70 to 7·24 sec. again overestimated. Weber's Law does not hold for the time sense. Temporal judgments in general are mediate, depending on organic processes, of which change in blood volume is one of the more important. Vasomotor change plays a predominant part in time up to 2 sec.; respiration strain comes in with longer intervals. These are, of course, not the only factors involved in interval estimation.] **C. H. Sears.** 'A Contribution to the Psychology of Rhythm.' [An experimental study of the time values given by competent performers to the notes of several simple musical selections. Two successive executions of the same selection (with short pause or without break) show a considerable temporal variation. In general, the second performance is the slower. The variations of the measures are not constant; and the relative length of the tones is also variable. In some cases there is marked lengthening of accented notes. There is a slight tendency to make the second note of a triplet longer than the first, and a marked tendency to make the last longer than either of the others. Intervals occur between successive notes on the same degree and on different degrees of the staff. Overlaps are common and of varying length. Playing in parts does not ensure greater accuracy than playing the air alone. Meumann's view that the musician is aided by a motor appreciation in his rendering of the fractional parts of intervals is probably right; but his conjecture that, in playing with both hands, the one hand helps the other in giving the correct relative length to time intervals is not borne out.] **H. B. Woolston.** 'Religious Emotion.' [The religious emotions are dependent on certain constitutional and organic factors. They vary pretty constantly with certain meteorological conditions and with bodily rhythms. They are increased by the use of physical stimuli. Exaggerated religious emotion is connected with certain diseased nervous states. As to their office in the religious life, they have no value at all, "except as the inward resonance shows ready response of the nature to a certain sort of influence, and except as the excitation leads to a large and worthy effort". In general, "religious emotion arouses the expansive manifestations of love, to which it is very much akin. And thus it leads to unselfish activity." Religion is also of value in enforcing morality, and thus forming a strong social bond.] **S. S. Colvin.** 'The Psychological Necessity of Religion.' [Religion may be defined as the feeling of absolute dependence. It can never be transcended or eliminated, (1) because intelligence is not perfect, nor knowledge absolute; (2) because life is not and can never be satis-

factory in itself.] **R. MacDougall.** 'Rhythm, Time and Number.' [The sensory rhythmisation of successive durations introduces always specific errors of estimation; it is only when the succession of intervals is not part of a rhythmical sequence that accurate comparison of their time values becomes possible. Moreover, every motor accompaniment of a series of regularly recurrent sensations tends to interfere with the proper estimation of the time values of their intervals, by becoming automatic. Nevertheless, it is on rhythmical processes, in the last analysis, that not only æsthetic apprehension, but also the sense of time itself depends. Contradiction appears, and the capacity of correct discrimination is destroyed, only when the intervals to be compared are bounded by dynamically unlike units. The estimation of time is based upon the phenomena of general attentive adjustment common to all the senses alike. The process of rhythmical integration is also involved in the numerical apprehension of serial impressions beyond very simple groups. "The limits of our capacity for estimating temporally extended periods or numerical series are to be looked for in the physiological laws which condition motor discharges on the one side, and make it possible or impossible for us to imitate the objective series by a system of organic strains; and, on the other hand, in the limits placed upon our discrimination of refined experiences of strain due to perception-reflexes taking place in some part of the bodily organism."] **A. J. Kinnaman.** 'Mental Life of Two *Macacus Rhesus* Monkeys in Captivity.'—I. [Methods of animal psychology: (1) free observation of animals in their natural habitat; (2) study of the development of young animals; (3) training; (4) free observation of animals in captivity; (5) experimental. Interpretation of data: sphere of the *lex parsimoniæ*. Characterisation of the animals observed. Repetition of Thorndike's experiments. Results: the monkeys have not reasoned; first efforts require much more time than later; a better may be substituted for a poorer mode of manipulation; manipulations are undertaken in a regular order; most of the learning is done by trial and happy accidents, with the recollection of these and the elimination of useless efforts, though the female has learned by imitation; ability increases to fasten on the essential point of difficulty in the tasks assigned. New tests: combination locks, form tests, size tests, discrimination of colour and shade. Instances of inhibition; of gradual association; of preference for bright colours.] **N. Triplett.** 'A Contribution to Individual Psychology.' [A curious instance of "a struggle of the letters . . . as they appear in words," of a mental war of words, which has persisted and developed from the fifth year to early manhood.] Literature.

International Journal of Ethics. Vol. xii. No. 4. **M. E. Robinson.** 'Originality.' [Suggestions for the promotion of originality in England by improvement of university teaching and by raising the tone of social life.] **J. Martin.** 'The Social Value of Trade Unionism.' [A defence of the industrial and moral results of unionism in America.] **J. McCabe.** 'The Conversion of St. Augustine.' [It was not a renunciation of sin so much as of all sexual affection, in accordance with the false ideal current among Christians at that time.] **A. J. Jenkinson.** '*The Problem of Conduct:* a criticism.' [An adverse criticism of A. E. Taylor's recent book.] **A. H. Lloyd.** 'Scholars of the Cloister: a defence.' [A defence of the work of scholasticism more especially in political economy and the theory of language.] **F. Thilly.** 'Intuitionism and Teleology.' [Using teleology in the sense of the ethical theory that an action's worth is determined by its results, the writer argues that intuitionism and teleology are not incompatible. It is only the more

extreme forms of each theory that are in conflict.] **J. D. Logan.** 'The Optimistic Implications of Idealism.' [Both pluralistic and monistic idealists assume that virtue implies happiness. This, however, is erroneous, for human goodness as being a war with evil will always involve unhappiness.] Book Reviews.

Proceedings of the Aristotelian Society. New Series. Vol. ii. **G. F. Stout.** 'Alleged Self-contradictions in the Concept of Relation. A criticism of Mr. Bradley's *Appearance and Reality*, pt. i., ch. iii.' [The fact that relations and qualities are mutually dependent does not make the concept of relation self-contradictory.] **B. Bosanquet.** 'Recent Criticism of Green's Ethics.' [A reply to criticisms of Green contained in A. E. Taylor's *Problem of Conduct*.] **A. Boutwood.** 'The Philosophy of Probability.' [Neither every-day experience nor inference gives us fact. Religion on the other hand gives us practical content. The function of thought is not to give us fact but increase our practical content as far as possible.] **Mrs. S. Bryant.** 'The Relation of Mathematics to Formal Logic.' [A defence of Boole's view that general logic is mathematics with all conceptions of quantity struck out; with an exposition of the chief forms of symbolic reasoning.] **G. F. Goldsborough.** 'The Ethical Limits of Method in Philosophy.' [A discussion of the relation of motive to method in philosophical investigation, leading to the conclusion that the choice of method is purely ethical in character.] **G. E. Moore.** 'Mr. McTaggart's *Studies in Hegelian Cosmology*.' [A criticism of the three chapters on "Human Immortality," "The Personality of the Absolute," and "The Further Determination of the Absolute".] **H. W. Carr.** 'Mr. Bradley's Theory of Appearance.' [A refutation of the contradictions alleged to inhere in the conceptions of space and time.]

Revue Philosophique. August, 1902. **James Sully.** 'Les théories du risible.' [Author criticises Hobbes and Kant's theories as being each incomplete alone. A satisfactory theory must include the leading principle of each.] **L. Dugas.** 'La surmenage à rebours.' By 'surmenage' author understands the violation (and attendant suffering) of the natural laws of labour. This phenomenon is conspicuous in the democratic education of to-day, which, regardless of natural inequalities, aims at rendering all eligible for all careers. **G. Palante.** 'La téléologie sociale et son mécanisme.' [Social evolution has passed through three stadia governed respectively by the three following laws: (1) Law of mental inertia and least effort; (2) law of activity directed towards the maximum of social utility; (3) law of activity directed towards the maximum of individual life and beauty.] Notes. Analyses et comptes rendus. Revue des périodiques étrangers (*Proceedings of the Aristotelian Society*). September, 1902. **Récéjac.** 'La confusion entre l'ordre social et l'ordre religieux.' [Christ was a mystic, conscious, above all things, of his union with God and of his divine 'election'. This latter accompanied by an expansive tendency. Mystic states, however, cannot be communicated—hence the institution of sacraments which stand between such states and clear ideas. The Church, which arose out of social needs, developed ritualism and also—in opposition to its founder—the conception of political power and the right of owning property.] **Palante.** 'Études sociologiques. II. Moralisme et Immoralisme.' [Immoralism, represented by Heine and Nietzsche, is the revindication of the rights and liberties of the individual as against the supposed rights and ends of society.] **Chayottes.** 'Le conflit actuel de la science et de la philosophie dans la psychologie. [Science studies the universe as it appears, tries to arrive at a clear and coherent representation of it;

philosophy aims at forming a conception of the universe as it is in itself and to furnish a complete explanation of it.] **T. Segond.** 'Publications récentes sur la morale.' Notices. Bibliographiques. Revue des périodiques étrangers. (*Psychological Review. American Journal of Psychology.*) October, 1902. **F. La Dantec.** 'La place de la vie dans les phénomènes naturels (I.).' [Too long to summarise.] **A. Binet.** 'Le Vocabulaire et l'Idéation.' [Record of a study of vocabularies of two sisters, subjected to the same influences but varying markedly in temperament.] **Girard-Varet.** 'Le langage et la parole : leurs facteurs sociologiques.' [Articulate language is not exclusively the outcome of an unconscious mechanism. It is the work not only of nature but also of man. It is a social phenomenon.] **F. da Costa Guimaraens.** 'Le besoin de prier et ses conditions psychologiques.' [The need of prayer is instinctive and organic ; it is part of the instinct of self-preservation. Like language, prayer also is a 'cry of the body'.] **F. Paulhan.** (Discussion.) 'La Méthode analytique dans la détermination des caractères,' Analyses et comptes rendus, etc.

Revue de Métaphysique et de Morale. 9e Année, No. 5. Septembre, 1901. **C. Bougle.** 'L'idée moderne de la nature (différenciation, hérédité, concurrence.') [Under these names describes the theories (1) of Milne Edwards that, 'as Darwin concludes,' 'the degree of superiority of an organised being is to be estimated according to the more or less perfect localisation and differentiation of its organs and their special adaptation to different functions' ; (2) of Lamarck that the modifications in an organ, due to the parent's use or disuse of it, may be inherited ; (3) of Darwin. Darwin *explains* the two facts which Edwards merely points out, namely, the existence of a variety (*a*) of species, (*b*) of organs ; and he points out a fact which Lamarck had neglected, namely, that the offspring of the same parents are born with differences which enable some to survive better than others in the same surroundings. The account of 'Natural Selection' is very clear and just and M. Bouglé points out that the theory is purely 'mechanical' in spite of Darwin's 'anthropomorphic' language ; but, in classing it as a completion of the mechanical explanation begun in (1) and (2), he neglects the fact that (1) contains no *explanation* at all, either mechanical or 'finalistic,' and that the only fact, of which (2) fails to give a mechanical explanation, namely the individual's power of adaptation to its environment, is also not explained by Darwin. M. Bouglé's object is to prepare for discussing the relation of this 'mechanical conception of Nature' to Ethics ; but the fact that under his 'theory of differentiation' he fails to distinguish the ethical judgment, 'differentiation is a sign of superiority,' from the historical fact that differentiation has increased is only one instance of many confusions which his remarks on this subject betray.] **G. Cantecor.** 'La morale ancienne et la morale moderne.' [A recent 'study' of M. Brochard's holds that the ancients did not use the notions of 'moral law,' 'duty,' etc., so prevalent in modern Ethics ; that hence these notions are 'factitious' and of 'theological origin'. M. Cantecor will submit that they are 'necessary and true,' and will explain why, in spite of this, the ancients did not recognise them, and that their connexion with theology and metaphysics is due to misunderstanding. I. To believe in a moral law is only to believe 'that there is an authority, for man, distinct from his desires' ; and this notion is logically implied in that of 'good,' since 'the good' means 'what we *ought* to will'. The Greeks, having begun by an appeal to 'reason' against 'external authority,' naturally did not see (*sic*) that reason itself is an 'external authority' in relation to our '*individual* nature' and our will : moreover, as was

natural, they only tried to 'define the ideal,' without asking the 'critical' question, 'How does there come to be an ideal at all?' This true philosophical method, which consists in investigating 'form' before its objects, was at first applied, even by the moderns, to 'theoretical' questions only: Shaftesbury and Hutcheson began that application of it to morality which was successfully carried out by Kant. II. Kant's real meaning (confusedly expressed and much misunderstood) is that to act on universal principles *is* to act reasonably: hence his moral law is 'a *datum* or act of reason,' not the action of a 'mysterious (theological) and arbitrary authority': he proves it, too, by showing that it alone 'makes possible' the admitted fact that we judge things to be good and evil. It is an 'authority' merely because 'reason' cannot deny that what is 'reasonable' should be done. A very poor article.] **J. Wilbois.**

'L'esprit positif.' [Continued from March number. II., Facts. (1) Mill's four rules of induction only apply to facts of the kind observed by 'common sense,' *i.e.*, definite given individuals; hence they are too 'infallible' (!): he and Comte did not understand the nature of the 'facts' with which modern physics deals. (2) The success of this science depends upon exactness of measurement, and, in proportion as our instruments are more exact, we have both (*a*) to make our experiments under extremely complicated conditions, and (*b*) to 'correct' our numerical results; but we cannot define either the conditions or the method of correction, which we actually choose, and our choice is only one of infinite possible alternatives: *hence* a '*scientific* fact' is both 'indeterminate' and 'created by us'. Our choice is (and ought to be) guided by (3) the *beauty* of an experiment or formula ('analogy' and 'simplicity' are only ambiguous expressions for certain forms of beauty); and by (4) 'the sense of progress' or 'of principles' = the desire to generalise a law, which is itself 'never universal or infinitely precise,' but is felt as a 'tendency'. (5) Of Comte's 'three stages,' the first two are marked by 'a refusal to act upon nature': the 'positive stage' (exemplified by nineteenth century physics) contains in itself more 'variety' than the other two put together; 'the positive spirit in physics' may be 'defined' as 'a spirit of invention which seizes, in a fact, the evolution of a principle, which is itself a means of possessing and unifying the given under a mathematical form'. (6) Both the 'Idealism of Liberty' and 'Mechanical Realism' are mistaken, the former because 'matter has certain habits,' the latter because its habits may change from time to time. Matter is (*a*) a mere 'potentiality,' its 'determinism' at any one time being the result of our ancestors' 'liberty,' but (*b*) it has a 'final cause,' which is 'the activity of the man of science,' and the final cause of this, again, is 'virtue'. Thus '*scientific* induction' is 'a durable act of the human race': it consists in 'obtaining the intuition of matter,' which can only be done by escaping from 'the illusion of space and time' and 'replacing ourselves in pure duration'. (7) Summary.] Enseignement. Questions Pratiques. Supplément.

L'Année Philosophique (11me année), 1900. Rédact. général, F. Pillon. Bibliothèque de philos. contemp. Paris: Felix Alcan. Pp. 1-131, Articles; pp. 133-314, Reviews. This number of M. Pillon's magazine contains four articles of a general nature: one by **M. Brochard** on 'The Myths in Plato's Philosophy,' another by **M. Hamelin** on 'One of the Sources of Spinozism,' a third by **M. Dauriac,** 'An Essay on the Categories,' and the fourth by **M. Pillon** on 'Bayle's Criticism of Cartesianism'. M. Brochard, in a short paper, points out that the myth is not alien to the spirit of Plato's philosophy, does not lessen its dialectical value, but is merely a garb which it can conveniently assume to clothe

its ideas. The second article contains a mere suggestion that Spinoza must have been influenced very largely by Aristotle, in virtue of the fact that Hebrew philosophy, as represented, *e.g.*, by Maimonides, was derived mainly from Aristotle through the Syrian and Arabian teachers and writers. Some striking parallels between Spinoza and Aristotle are mentioned to give cogency to this contention. M. Dauriac's essay is somewhat rambling and inconclusive. He dismisses the universal validity of the categories, insists on their "contingency," and then seems to bring back most or all that he has taken away from them by explaining that they "participate" in "necessity". The last article is a continuation of a series on the same subject which has appeared in preceding numbers of the magazine. It is a very thorough analysis of some of Descartes fundamental conceptions, and a cautious review of Bayle's criticism. Amongst other points, one of considerable interest may be mentioned. Bayle's interpretation of substance varies throughout his criticism of Descartes, the truth being that he had in view two quite distinct conceptions of substance and did not see his way out of the difficulties presented by both. One was derived from scholastic Aristotelianism, the other from the new philosophy initiated by Descartes. According to the former substance is a kind of neutrum which can appear with different or even any attributes, and may hence be stripped of all,—which makes any distinction between spiritual and material substance ultimately valueless. According to the latter it is held that attributes cannot be separated *realite* from substances at all, that they are the *essence* of substance, that extension, *e.g.*, and matter are one and the same thing, and that thus there may be different substances, but no remainder which is equally something or nothing. That this distinction has a very important bearing not merely on questions of nominalism and realism but also on most metaphysical questions need hardly be pointed out.

Zeitschrift für Psychologie und Physiologie der Sinnesorgane. Bd. xxviii., Heft 3 und 4. **T. Lipps.** 'Einige psychologische Streitpunkte.' [Three criticisms of Ebbinghaus. (1) Ebbinghaus's theory of fusion leads, if taken literally, to the absurdity that fusion is grounded in an enhancement of qualitative distinctness or independence. An examination of Stumpf, Wundt and Ebbinghaus leads to the conclusion that the true basis of fusion lies in the congruent rhythms of the (unconscious) psychical processes which underlie sensation. (2) There is no such thing as a 'sensation' of motion, or of tension or weight. Innervation sensations are to be replaced, not by 'muscle' sensations, but by certain ego-experiences, effort feelings, *Strebungsgefühle*. The point is sustained by appeal to pathology. (3) The relation of similarity is nothing sensational, not a general characteristic of sensation, but an apperceptive experience; a predicate of two or more contents, *e.g.*, of the two colours, red and violet, "wenn *ich* sie *zusammennehme*". It is not given, as attribute of the colours, when these themselves are given.] **E. Wiersma.** 'Untersuchungen über die sogennanten Aufmerksamkeitsschwankungen.' —II. [(1) Practice in mental work at a definite time of day appears to influence capacity of perception; if this is the case, then the time of greater mental achievement may be shifted, despite an original disposition. The large differences of perceptual capacity at different times of day make it necessary to experiment always at the same hour, if one is seeking to estimate mental achievement. (2) Capacity of perception is seriously reduced by mental and physical exertion. (3) The taking of 10 grammes of absolute alcohol reduces capacity of perception; fatigue soon makes its appearance. (4) The taking of 3 grammes of bromide of

sodium increases perceptual capacity, not only on the day itself but for the following day as well. The effect may be due to the removal of excitatory influences.] **E. Kalischer.** 'Analyse der aesthetischen Contemplation: Plastik und Malerei.' [By 'aesthetic contemplation' is meant the mental process which may be termed specifically æsthetic. The mental attitude in contemplation is a psychological anomaly: there is intensive concentration of attention, while yet the normal range of consciousness (*Enge des Bewusstseins*) is transcended. Attention is focussed upon sensory impressions which, as part-contents of highly complex ideas, possess so great a power of reproduction that a minimum of sense datum releases a maximum of intellectual process. There is thus a peculiar relation established between the elements of consciousness and the complexes whose parts they are: between mental force or power and mental process or occurrence. All our mental force is collected in our concentration upon the sensory impressions; but what the senses receive is minimal in comparison with the range and number of ideas which the impressions arouse, and which develop as if under mechanical stimulus, without the active participation of the psyche. The author seeks to explain the anomaly by drawing a parallel between the conditions governing certainty and regularity of reproduction and those governing artistic contemplation. The reproduced ideas (1) appear only in indirect vision and (2) possess concrete universality. The theory which most nearly approaches the author's, in spite of its radically different formulation, is that worked out by K. Lange in his *Die bewusste Selbsttaeuschung als Kern des aesthetischen Genusses*, 1895.] **A. Fontana.** 'Ueber die Wirkung des Eucain-B auf die Geschmacksorgane.' [The author recommends the drug eucaine-B, whose formula he gives, in place of cocaine, for taste experiments. Its effect, like that of cocaine, is greatest in the case of bitter tastes. It has various advantages over cocaine, if it is not altogether as effective. For all but bitter tastes, its operation must be controlled before experimentation, owing to individual differences.] **A. Bernstein.** 'Bemerkung zu der Arbeit von Dr. E. Storch ueber die Wahrnehmung musikalischer Tonverhaeltnisse.' [Claim of priority for the statement that the substrate of musical thinking is given in the memory images of laryngeal movements.] Besprechungen. [W. Stern on Münsterberg's *Grundzuege der Psychologie*, I.; and A. Wreschner on R. Müller's *Naturwissenschaftliche Seelenforschung*, III.; Wille, Hypnose, Zweck.] Literaturbericht. Bd. xxviii., Heft 5 und 6. **L. Hirschlaff** mit Unterstuetzung von **H. C. Warren.** 'Bibliographie des psychophysiologischen Literatur des Jahres 1900.' [3,482 titles, as against the 2,627 of the *Psychological Review*, published in March, 1901.] Bd. xxix., Heft 1. **J. Volkelt.** 'Die entwickelungsgeschichtliche Betrachtungsweise in der Aesthetik.' [The subject-matter of æsthetics is limited by genetic considerations in two ways; for its principal problem is the establishment of the æsthetic norms recognised by the mature feeling (individual genesis) of the modern man (racial genesis). A universally valid æsthetics is an ideal, to be approximated at best in the fundamental chapters of an Æsthetics, in no wise attainable in the portions that deal with the several æsthetic departments. But in spite of this double limitation, one may not speak of a genetic 'method' or 'foundation' in æsthetics. Genetic considerations are necessary, but can be introduced only on the assumption that an æsthetics—based on the experience of the mature modern man—has already been worked out, and by the mediation of an essentially psychological procedure. The 'systematic' portion of æsthetics, in particular, must consist wholly in a working-over of first-hand æsthetic experience

(one's own or others') under the guidance of psychological fact and theory. Such a working-over implies, of course, constant reference to objects of nature and of art, of all times and places; but genetic arguments play a very small part indeed in it. Some aid is rendered, further, by the changes of meaning in words. Darwinistic questions are entirely out of place; they are to be raised only in the genetic portion of æsthetics.] **E. Storch.** 'Ueber das räumliche Sehen.' [Monocular vision tells us nothing of the true magnitude, distance or form of an object. These determinations, when correctly made, depend on the co-excitation of spatial experiences otherwise obtained (principally from the sense of touch). Binocular vision improves upon monocular only in the fact that it gives us (within certain limits) sensory data regarding the relative distance (relative before and behind) of the parts of the seen object. It, too, requires the support and refinement of extrinsic space experience. It follows that a visual form which, in consequence of such experience, is always or usually apprehended as a symbol of a determinate real form, will bring this real form to consciousness even when attendant circumstances demand a different spatial interpretation. If the meaning put upon the visual form be not in accord with reality, we have what is called an 'optical illusion' before us. The author works out his theory, following Filehne, by reference to the best-known optical illusions.] Besprechung. [J. Cohn on Ostwald's *Vorlesungen über Naturphilosophie.*] Literaturbericht.

Vierteljahrsschrift für Wissenschaftliche Philosophie und Sociologie. 1902, Heft 2. **Ernst Goldbeck.** 'Das Problem des Weltstoffs bei Galilei.' [Deals with the method and historical significance of Galileo's polemic against the traditional Aristotelian distinction between two substances, one earthly and subject to change and vicissitude, the other belonging to the heavenly bodies, perfect and immutable. A good article.] **A. Vierkandt.** 'Die Selbsterhaltung der religiosen Systeme.' [The following grounds of the self-maintenance of religious systems are assigned. (1) Imposture. (2) False statistics, *i.e.*, the neglect of cases which fail to confirm a belief and undue emphasis on those which appear to favour it. (3) Adaptation of judgment to consequences, as when a supernatural power is only believed in when and so far as it has apparently given proofs of its efficiency. (4) The maintenance of propositions incapable of verification and the demand for conditions which cannot be fulfilled. (5) Effects of suggestion. (6) Effects of fear. (7) Trials by ordeal supposed to have divine sanction. (8) Dreams and ecstasies.] Heft 3. **Cay von Brockdorff.** 'Galilei's philosophische Mission.' [Brings into light the significance of Galileo as a founder of modern Philosophy; he discovered new and fundamentally important logical principles and methods, and originated a new attitude towards the universe.] **C. M. Giessler.** 'Über den Einfluss von Kälte und Wärme auf das Seelische Funktioniren des Menschen.' [Indicates the effect of heat and cold on the matter and form of ideational process.] **Karl Marbe.** 'Brömses und Grimsehls Kritik meiner Schrift:' "Naturphilosophische Untersuchungen zur Wahrscheinlichen Keitslehre". [An interesting discussion; but brief summary is impossible.] **A. Vierkandt.** 'Natur und Kultur in Sozialem Individuum.' [An attempt to separate the "natural" elements in man's mental life from what is due to his social environment.]

Archiv für Systematische Philosophie. Bd. viii. Heft 2. **H. Rickert.** 'Uber die Aufgaben einer Logik der Geschichte.' [Maintains that History is essentially concerned with individual facts and processes and not with general laws or class-concepts of any kind. Its universal

concepts are concrete and collective rather than abstract and distributive.] **Stephan Witasek.** 'Wert und Schönheit.' [There is no peculiar kind of value which is distinctively æsthetic. The contrary assumption is due to a confusion between value and that which posseses value,—in this case beauty.] **A. Drews.** 'Zur Frage nach dem Wesen des Ich.' [Denies that introspection is cognition of an ultimate reality. Behind conscious process, as its real basis, there is unconscious will. All will is unconscious, never a mode of consciousness.] **Emil Bullaty.** 'Das Bewusstseinsproblem.' [Material objects are not directly experienced, as hunger and toothache are.] **Antioco Zucca.** La soluzion del Grande Enigma. Bd. viii. Heft 3. **J. Petzoldt.** 'Die Notwendigkeit u. Allgemeinheit des psychophysischen Parallelismus.' [It is the ultimate postulate of all knowledge that whatever exists or happens is unambiguously determined by its conditions. But no psychical fact is thus determined by other psychical facts. Hence all psychical facts are determined by their bodily concomitants. The simultaneity of conditions and conditioned holds for all unambiguous determination. This theory of parallelism is not to be taken as having metaphysical implications.] **Emil Bullaty.** 'Das Bewusstseinsproblem.' [The reality of which the material world is a phenomenon is directly manifested in the spontaneous functions of consciousness, *i.e.*, Thought and Will. Hence it is possible for us to know this reality in spite of its not being immediately experienced in sensation or perception.] **O. L. Winfrid.** 'Die Lösung des Welträtsels.' [What the riddle is, it is difficult to discover. The solution is somehow to be found in a rigid severance of the form of knowledge from its matter.] **A. Guesnon.** 'Raison pure et Métaphysique.' [An Exposition of the Philosophy of F. Evellin, mainly in the form of a series of extracts from his writings. The main point emphasised is the distinction between thinking in terms of the imaginable and the thought which is concerned with the unimaginable. To this distinction there corresponds an ultimate division of philosophical points of view.]

Kantstudien. Bd. vi., Heft 4. **A. Gallinger.** 'Zum Streit über das Grundproblem der Ethik in der neueren philosophischen Litteratur.' [(1) Defends Kant's Categorical Imperative, in the form 'Act so that you *can* always *will* the maxim of your will as a universal law,' against objections, and tries to show (2) that every ethical inquiry must presuppose some supreme *criterion* of moral action, and (3) that a consistent application of any other criterion than Kant's Law leads to conflict with actual moral judgments. To show (3) we have mainly a long critique of Paulsen and a short one of Gizycki, and to show (2) mainly critiques of Simmel and Stern: (1) also includes short critiques of Windelband, Jodl and Brentano. The author shows conclusively that these writers have neglected most important distinctions; but he seems himself blind to others equally important, and is grossly unfair in some of his objections to Paulsen. His defence of Kant's formula is highly ingenious and novel (based, he says, on Lipps): he assumes that '*can* will' refers to a psychological fact, namely, that we all always will the same *universal* rules of action, and that 'under like circumstances' refers only to those among the actual circumstances *which we take into account;* by which two definitions (which Kant certainly never intended) he makes it plausible that all normal moral judgments could be deduced from his formula: but he seems quite unconscious, that by thus restricting the meaning of the Imperative and by making it a mere *criterion*, he destroys its relevancy to two other problems which Kant certainly intended to solve, (1) the definition of what 'right' means (2) the proof that obedi-

ence to the Imperative is not only consistent with moral common sense but necessarily right. Again he fails to see that, even if his formula expresses a correct analysis of the psychical event, which we call 'a *moral* choice,' we mean, by so calling it, *not only* that it is of this nature, but *also* that it is 'right' in another and more ultimate sense, in which its rightness does depend on its results.] **R. Reininger.** 'Das Causal-problem bei Hume und Kant.' [Quite worthless: the writer has utterly failed to distinguish the various questions which he pretends to answer. He sees both clearly and truly only (*a*) that both Hume and Kant thought all causal judgments synthetic; (*b*) that Hume tried to explain why we *believe* that one thing will follow another, and (*c*) denied the possibility of proving the existence of necessary connexion (in some sense) between any two events; finally (*d*) that Kant does not deny Hume's explanation (*b*), but tries to prove, what Hume declares indemonstrable (*c*), by the 'metaphysical hypothesis' that 'our understanding gives laws to nature'. On these data H. Reininger seems not unnaturally to conclude, that Hume's theory is true in all essentials, and that Kant, instead of refuting him, has only made a brilliant suggestion in answer of an insoluable problem which Hume did not attack. Everything else is either vague or untrue or both. *E.g.*, he tells us Hume and Kant are agreed that 'the basis of special causal judgments is experience,' without a hint that, whereas Kant means by it 'experience is necessary to teach us what is necessarily connected with what; but it does teach us truly,' Hume means the following tangle of contradictions 'experience *causes* us to believe that two things are *necessarily connected;* but there is no reason to believe that *any* two things are so; and even if the two things in question were so, experience does *not* cause us to believe that they are so, since it only *causes* the expectation of the one to be *necessarily connected* with the perception of the other.'] Recensionen, etc.

X.—NOTES.

MIND ASSOCIATION.

THE Annual General Meeting of the Association was held on 8th November last in Trinity College, Cambridge. It was resolved that the general meeting next year be in London. On the motion of the President a committee was appointed to consider, in conjunction with the Psychological Society, the advisability of publishing in a supplement to MIND such researches in experimental psychology as from their length and technical character would be unsuited for the ordinary numbers. The following is the full list of the officers and members of the Association :—

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THE LATE DR. RYLAND.

Frederick Ryland, M.A., who died at his residence at Putney on 5th October, was born in 1854, the son of the late John Benjamin Ryland, of Biggleswade. He received his early education at Mead House, Biggleswade, and graduated at St. John's College, Cambridge, taking a high place in the Moral Sciences Tripos of 1876.

He married in 1883, Sarah, daughter of the late Henry Nathan, Esq., who with two daughters survives him.

His first book, published in 1880, was *The Student's Handbook of Psychology and Ethics*, of which the seventh edition was rewritten in 1897, and which was followed by *Locke on Words* (1882), *Chronological*

Outlines of English Literature (1890), *Ethics* (1893), *Logic* (1896), *The Events of the Reign* (1897), and *The Story of Thought and Feeling* (1900).

Mr. Ryland was also a contributor to MIND and *The Academy*, and edited Swift's *Journal to Stella* (for Bohn's Library), several of Johnson's *Lives of the Poets*, *London and the Vanity of Human Wishes*, Pope's *Rape of the Lock*, *The Essay on Man*, *The Essay on Criticism*, and a *Selection of Browning's Poems*.

Apart from his philosophical and literary attainments, Mr. Ryland had achieved during the last five and twenty years considerable distinction as a teacher and lecturer, being, at the time of his death, Assistant Professor of Philosophy at University College, London. Remarkably clear-sighted and logical, he possessed not only the faculty of getting to the heart of things and bringing forward the essential parts of his subject, but also an intuitive appreciation and sympathetic patience with his hearers' difficulties. In diction invariably simple and correct, he conveyed with apparent ease the most subtle ideas into the minds of others, and could make the driest facts interesting. In a very wide sense his pupils became his friends, and loving this part of his work for its own sake, the fear that ill-health might force him to give it up was latterly one of his greatest troubles.

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

I.—THE DEFINITION OF WILL.

By F. H. Bradley.

No. II.

We have defined a volition as "the self-realisation of an idea with which the self is identified," and in the foregoing article we to some extent explained the first part of these words. I shall now proceed to show what is meant by a practical identification with self. I am in the present article still forced to assume the fact of 'ideomotor' action, but the nature of this will be discussed on a later occasion.

To ask what is meant by the identification of an idea with my self, would in the end raise the whole question of the essence and origin of consciousness. We find that self and not-self are related both theoretically and practically, and we may inquire in general if these terms and their distinctions are original and ultimate. Or, if this problem is dismissed or is placed on one side, we may discuss the question of rank and priority as between perception and will. Since practice implies knowledge we may contend that the latter must come first, or we may on the other side reduce theory to a one-sided development of the practical process. We may insist again that neither attitude is higher in rank, and that neither taken by itself is original or prior. Both appear together, we may add, as essential aspects of consciousness, and we might go on to investigate their exact nature when first they appear, and attempt to trace their development from their earliest forms, if not from states

which are neither. But in this article it is not my object to pursue such inquiries. I shall take the theoretical and the practical relation of the self to the not-self as facts of experience, and shall try to point out some aspects which are contained in both, attending specially of course to the practical side. Facts of experience the reader must understand to be experienced facts, and he must not include in these anything so far as remaining outside it appears in or acts on the experienced.

If in this way we examine the practical relation of the self to its world, we at once discover the features which were set out in our definition.[1] There is an existing not-self together with the idea of its change, and there is my self felt as one with this idea and in opposition to existence. And there follows normally the realisation of the idea, and so of my self, in the actual change of the not-self; and this process must arise from the idea itself. And the process, at least to some extent, must be experienced by my self. In volition, if I attempt to find less than all this, I find that volition has disappeared. And, taking this for granted, I will go on to consider the practical relation in its distinction from mere theory, and I will try to indicate that special sense in which the self is practically made one with the idea.

(i.) The not-self, we have seen, is an existence, and this existence is for me. It comes before me or comes to me as a perceived other or as an object. Now in the practical relation it is important to observe that this 'other' has two senses, and that only one of these senses is found in mere theory. It is in the sense common to theory and practice alike that I am going first of all to consider the object. The perceived object, we may say, on the one hand comes as something which *is* independently, and on the other hand it is felt as something which is for me. I am not attempting here, the reader will understand, to explain or to justify the apparent facts, but am endeavouring merely to describe them. The object *is* in a sense which is not applicable to the whole felt moment, for, while the object is felt, it is also experienced as other than the felt self. It is therefore for me as something which is not myself. But to say that its relation to me is an object, or that my passivity towards it is an object, would certainly be false. How far these aspects may become objects at a later time and for reflexion, I do not here inquire; but at first and in their essence, while we

[1] MIND, N.S., No. 44. The reader must also be referred here to the article on Conation in No. 40.

confine ourselves to the theoretical attitude, they certainly are not objects. In the 'felt-mine' of the moment the object appears as something other than the rest, but its relation to the rest, if we are to speak of its relation, is a matter of feeling.[1] That relation with both its terms must fall within what is experienced, but only one term of the relation is experienced as an object. The not-self so far appears as an other but not as an opposite.

(ii.) In the practical relation the aspects we have described above are still to be found, but another feature is added which transforms the character of the whole. This feature is the opposition between self and not-self. In my practical attitude I experience myself as something contrary to the object. I do not merely receive the object and feel it as mine, although other than me, but I also feel myself as something which is opposite and struggles to change it. And in this total feeling both the not-self and the self are present now as contrary realities. The relation with both its terms now appears before myself as two objects, but in what sense I am an object to myself we must go on to inquire.

In my practical consciousness there is a relation, we saw, between the not-self and an idea. This idea is the idea of a change in that object not-self, and the idea in its conflict with the not-self is itself an object for me. Hence a relation with both its terms is now before me as an object perceived. But this relation on the other hand is not merely a new perceived object. For I feel myself one with the idea in a sense in which I am not one with that object which opposes it, and therefore in and through this idea I feel myself in collision with that object, which has thus become in a further sense something alien and not-self. And my felt oneness with the idea and felt contrariness to the conflicting existence are not two separate facts but are inseparable aspects of one fact. Whether in any sense opposition can otherwise be experienced and known I do not here inquire, but except through an idea there is no opposition if that is really practical and means will. And this is a point which has perhaps been sufficiently discussed in previous articles. The practical relation depends on an idea, an idea with which in a special sense I feel myself to be one, and this idea is an object and it conflicts with an object. But, as for myself, I am not properly an object

[1] I should perhaps remind the reader that I do not accept the restriction of 'feeling' to denote merely pleasure and its opposite.

to myself except so far as I enter into the content of this idea. How far I must so enter is however a question which must be deferred for the present.[1]

(iii.) This practical identification of self with the idea may be called specific,[2] and we cannot explain it in the sense of accounting exactly for its quality. On the other hand we can indicate the distinctive feature which it adds to mere theory, and we can show some conditions which its presence implies. This may be done most clearly perhaps in reply to a possible objection. "The self," it may be said, "is identified alike with every one of its contents, and, as to the idea, you admit that the idea is an object and a not-self. Is not then the special oneness of the idea and the self something which in the end is meaningless?" In replying to this objection I shall have in part to repeat what I have put forward already.

In the practical relation we can find in the first place an existing not-self. There is an object, and it is felt as mine though as other than me. And we have in the second place an idea which conflicts with this existence. This idea once more is an object, and it is felt likewise as mine, and felt likewise again as other than myself. And so far we have no aspect, it may be said, which is not found in mere theory. For we have two objects in relation or two elements of one complex object, and each of these is mine and is not-mine in precisely the same sense. But we have so far left out of sight the essential and differential feature of the case. The idea in collision with the existence, although it is an object and a not-self, is also, in its conflict with the existence, felt specially to be mine and to be one with myself. Hence this special feeling attaches itself to but one of the two objects before me, and it qualifies that one in its actual opposition to the other. The existence therefore, being opposed to what is specially one with myself, becomes *ipso facto* itself opposed and contrary to me. And I, in my union with the idea, am in conflict with existence. And

[1] This is the question as to how far self-consciousness is present always in will.

[2] We must however be careful to avoid exaggeration on this head. I consider that apart from the practical attitude the self can be aware of the agreement or disagreement of its own felt content with that of the object before it. I think that such a sameness or difference may be felt, and the feeling then translated into a judgment. And, if this were not possible, we should I think find it difficult to account for some aspects of self-consciousness. This is a matter however with which I cannot deal here.

thus by one and the same means the idea, though a not-self, is felt as myself, and the opposing existence becomes a not-self at a higher remove. It thwarts the self in the idea and is so experienced as in collision with me.

I have explained that I assume nothing as to any temporal or other priority, and I am far from maintaining the possibility in fact of a mere theoretical attitude. But to the reader, who will not forget this necessary warning, I will offer what follows as perhaps a help to a better understanding. Let us suppose a self with an existing object, and let us suppose that the contents of the self and of its object are discrepant. The felt content of the self will here be hindered in fact by the not-self, but the self so far will not know that itself is hindered. It will on the other hand feel the uneasiness of its checked expansion and its object will become disagreeably qualified. But now let us suppose further that the main aspect, in which the self is hindered, itself qualifies the object inconsistently with the object's existence, and so itself becomes an idea for the self. With this the whole situation is forthwith changed. In this idea we have now an object in collision with existence and hindered by that. And the self now feeling itself to be specially at one with the idea, itself is hindered by existence and is aware of the hindrance. And the existence in this way has become not merely other but opposite. We in short have risen into the level of actual conation and will.[1]

(iv.) The actual volition, we have seen, is the alteration of existence so as to agree with the idea. The existence, we may say, is changed by the idea to itself, and in the same process the self as one with the idea realises itself in the not-self. This process of self-realisation must up to a certain point be experienced as such by the self, and the self must become aware also however momentarily of the resulting harmony and peace. My world in a completed volition is not merely something which is there for me and which agrees with itself. My world has become so far the existing expression and realisation of my own self. And, so far as this result goes, the not-self persists only as the medium and element in which I have carried out and am satisfied with my being. It will repay us once more here to contrast the practical with the theoretical mode of consciousness. In the practical relation both self and not-self are alike qualified discordantly by the idea of the change.

[1] I will once more here refer the reader to my previous articles in MIND. *Cf.* also *Appearance*, pp. 606-607.

There is on each side a discrepancy between existence and idea. The idea both is and is not the adjective of the not-self; and the same thing again is true in the case of the self. From the one side as limited by actual existence I am not changed, and on the other side I feel that I am qualified by the idea of the change. I feel myself one with the ideal change in its opposition to the actual existence. Hence the process which carries out into fact the content of the idea, realises for me my inmost being which before was ideal. And because I am aware of the idea as itself making the change—a point which will shortly be discussed and explained—I am aware also that this change is the work of myself. In the result therefore I have expressed myself harmoniously on both sides of the relation.

The attitude of theory presents us here with an important contrast. The theoretical not-self, as we so far find it, may be discordant in various degrees, and the reality may more or less conflict with the idea which endeavours to express it. And in this discordance, since it qualifies me, I may suffer internally, and by its removal, so far as it is removed, I may feel myself expanded and satisfied. But the process here is experienced as in the main the self-realisation of the object. The process can hardly be alleged to be made by the idea, and most certainly the process is not made by myself. My self in one with the idea is not opposed to the object, but on the contrary I follow the fortunes of the not-self, and receive from that inactively my part in its failure or success. I may will to think and to perceive, and in some thinking and in some perception there is doubtless will. But this will is not aimed at an alteration of the object itself. Its end is the appearance of the object in me as apart from any will of mine the object is real. And an attempt to make the truth other than it is by my will would at once subvert or at least transform my position as perceiving or thinking.

(v.) There are several points on which I will now endeavour to obviate misunderstanding. The existing not-self is not always my external world, but may consist in any existence of and within myself which is opposed to me.[1] We have here within the whole, which is felt as my present being, the opposition of two objects. We have the idea of a change in some existing feature, and together with this first object comes the feeling of myself as specially one with the change. But, on the other side and as a second object, we have the actual feature of myself as I exist in fact, and

[1] *Cf.* here my *Appearance*, p. 97.

this second object is a not-self which is opposed to the idea and to myself. And we have then the process in which the inner self carries itself out into this not-self. Everywhere, to pass from this special instance, we must bear in mind a general result. An element, which in one sense is a not-self, may in connexion with an act of will take a different position. And this is a point to which I must invite the attention of the reader. The not-self in a volition is always more or less particular and limited, and it is limited, we may say, for the purpose of the volition. Beside those internal feelings which have not even the form of a not-self or object, there will be tracts even of our outer world which for the moment will share their position. They will not make part of that not-self which opposes the idea and our volition. They will on the contrary fall back into that general mass which is felt as myself, a mass which in various degrees qualifies me as in the idea I oppose myself to the not-self and so carry myself out. In will (to repeat this) the not-self which conflicts with the self is but one part of my world. The rest will lie within that self which is one with the idea, and will to a varying extent in the conflict support the idea and the self. On the whole, we may say, and in the main there is between my world and my will no discrepancy, and, if it were otherwise, life could hardly be lived. Even the extreme case of suicide throws no doubt on this truth. For there is never even there an opposition between my world and the mere will for its negation. The conflict on the contrary is always between various elements within the self and its world, and it is this whole which in exceptional cases is distracted fatally. The same general result holds good also, but with a difference, in the case of the theoretical relation. The object for perception or thought is never the mere whole reality. Our object is a partial appearance in which and as which the reality is for us, and in the end the opposition is between the concrete reality felt as a whole and this its partial appearance.[1] But in this conflict I as distinct from my world cannot actively take part. In will on the other hand the conflict is between myself, as expressing the main reality and the true self and as identified in feeling with the idea of a change, and over against this some exist-

[1] An idea is false, we may say, in so far as the reality cannot be expressed by it without conflict, and a will is bad in so far as the idea fails to express the genuine nature of myself. In this article I am concerned only, it will be understood, with the formal essence in which all volitions agree, and I pay no regard to any 'substantial' or 'material' differences between them.

ing particular feature of the whole. And this feature, we have seen, as thus contrary to me is in a special sense alien and not-self.

(vi.) I will pass on from this to emphasise two points of importance. In the first place both self and not-self must in volition have a concrete content, and both must be actually experienced in their own proper nature. We must have an experienced relation between two experienced terms, and, if it were not so, volition would not be 'a fact of experience'. If it were not so, an experience of activity or passivity, or of self and not-self, would become unintelligible, if at least we mean by such an experience the awareness of these things in their own proper characters. We should in each case be speaking of something about which by the conditions we could have no knowledge. And the reply that other men, though not the present writer, can distinguish between the fact of activity and the awareness of that fact, is to my mind irrelevant. For it would hardly follow that we may speak of activity and of will as existing there where by the conditions we could not possibly be aware of their existence. Such a knowledge, if maintained, seems at least to require some explanation. And it is surely misleading, I would add, to term activity a fact of experience, if it does not itself fall within that which is experienced.

In will the terms and their relation and in short the whole process is experienced, but this process in all its aspects is not experienced in the same sense throughout. (*a*) The existence and the idea of its change, we have seen, are both objects. And the self is an object to itself so far as it is contained in the idea—a point to which we shall presently have to return. And the self again, as itself carrying itself out into fact, must to a certain extent be perceived as an object. But however much these aspects of the whole come before me as objects, they are none the less experienced also as elements felt within the 'now mine'. And (*b*) this experience of my total present is itself not an object, and it cannot in the end even for reflexion become an object throughout. And (*c*) the same result holds of my identification of myself with the idea. The felt oneness of my inner self with the idea of the change cannot become an object, unless we go beyond and unless we so far destroy will. It does not matter how much my self has passed beforehand into the content of the idea, and it does not matter how much my self perceives itself as carried out in the act. In the end my union with the idea must remain essentially a felt union, and, so far as by reflexion it be-

comes an object, volition so far has been superseded and has ceased to exist. I do not deny that this union, while being felt, can perhaps to some extent also be an object, but it is merely as being felt, I contend, that it moves. Its partial appearance in reflexion, so far as it appears there, impedes it. And in the end no reflexion can bring it before me in its experienced integrity. The same conclusion, I may add, holds good of self-consciousness in general. An exhaustive objectification of the present self remains in principle impossible; but this is a matter on which we are unable here to enlarge.[1]

I have now endeavoured to explain how in volition I am identified with the idea and opposed to the not-self. I have still to ask how far my self enters into the content of the idea, and together with this question I shall have to inquire into the experience of agency. But, before I enter on this subject, I will endeavour to dispose of some remaining difficulties. I must deal briefly with the nature of reflective volition, and in connexion with this will remark upon Choice and Consent. And I will open the discussion of these points by stating a probable objection.

"Your account," it may be said, "whether so far it is satisfactory or otherwise, applies to will merely in its first and undeveloped form. But will in the distinctive sense is not found at that level. I do not really will until I suspend myself and consider my future course, and then assert myself in something like choice or consent. This is the essence of volition, and, however much your account may be laboured, this in the end falls outside your definition of will."[2] Now I cannot here attempt even to sketch the development of will from its lowest form upwards. But in its highest form certainly no principle is involved beyond those which in our account we have set out already. And I will endeavour very briefly to show how this is true. I will then

[1] I cannot accept without qualification the statement that we are self-conscious in the practical attitude and in the theoretical attitude no more than conscious. Not only in my opinion do we fail everywhere to be completely self-conscious, but I could not admit without some reserve the doctrine that all self-consciousness is in its essence practical. The above statement however expresses, if it exaggerates, an important truth.

[2] The same objection could be urged about our higher and lower will, our divided will, our attention, and so forth. I have already treated these cases so far as is necessary in MIND, N.S., Nos. 41 and 43, to which latter article I may refer specially for some illustration of what follows.

point out the proper meanings of Choice and Consent, matters on which some dangerous confusion appears to prevail.

In the higher form of volition (so much cannot be disputed) we come upon a most important difference. Our will at this stage has become reflective. I do not here identify myself immediately with this or that practical suggestion, but on the contrary I regard these as things offered to me for my acceptance or rejection. This does not mean merely that I am inconclusively moved by conflicting ideas, and that I fluctuate and waver in their ebb and flow. And it does not mean that I am held motionless by balanced forces or paralysed by shock. The ideas are not mere forces which in me produce states of motion or rest. They are objects which I separate from myself and keep before me at will. The suggestions so far are mine, and again in another sense they are not mine, and their adoption in short lies entirely with myself. Of all the suggestions offered I may accept none, and, when I accept one, I do not merely become what is offered. I actively adopt the idea, I take it into myself, or, if you prefer the phrase, I put myself into the idea. This is a specific act, and with it comes a mode of feeling which is specific. And this by an exaggeration has been emphasised as a fact irreducible and unique.

The exaggeration being omitted I think the above statement is correct, but I claim that the facts are embraced by our definition of will. Indisputably the self is able to rise above suggestions. The self can in a manner alienate these from itself, and then, if it does not reject all, can adopt one of them formally. And it is desirable, I am sure, to lay stress on these facts. On the other hand I cannot take the facts as a kind of supervening miracle which, I know not how, is to prove something—it seems not easy to say what. The self can suspend itself, but, as soon as we inquire into the means, there is an end of the miracle. The means we can discover in every case to be a higher idea, and this higher idea, at least in one of its aspects, is the negation of the particular suggestions. It is with such an idea that in reflective will our self is identified. And the consequence, that has been described above, is the natural result. Given a further and a remoter principle, not in union with the suggestions offered, or not in union at once and immediately with these suggestions as they are offered, and the principle of suspension and of adoption is present. The idea may be of a special end which must be reached by some particular method, and cannot unite itself at once with two methods however much both belong to it. Or the idea

again may be a principle which is general and abstract, and it may, for instance, consist in a rule of not at once deciding on offered suggestions. But, whether more or less abstract, the idea always works in the same way. My self is identified with it, and is hence related to the detail which falls under it. And my self is related to this detail positively, and also, as we have just seen, negatively. Hence my self can confront the detail as a spectator and can hold itself aloof. Then, as soon as one particular (however this happens [1]) becomes superior to the rest, and appears as the means by which the principle can pass into reality, the situation is changed. The self in one with the principle comes together with this single particular, and it feels itself reunited with its object by an act of adoption. And here is the origin of that felt estrangement and aloofness and of the following awareness of reunion. These experiences certainly are specific, and it would be strange if they were not so; and you may call them irreducible, if you mean that from their conditions they could not wholly be constructed. But, unless the doctrine just advocated is seriously wrong, these experiences are neither unique nor exceptional.[2]

If we take our stand on the principle which has just been laid down, we may without difficulty apprehend the essence of choice and consent. Choice, to begin with that,[3] is (*a*) in the first place not merely intellectual or perceptive. A process which ends with a judgment, even if that judgment is about the means to an end, is so far, we must insist, not a genuine choice. The process is so far not choice, even if it leads to the conclusion 'I like this best' or 'this is nicer'. Distinction by a type and the selection by a type of one thing to the exclusion of another, if you take this process as issuing in a judgment, is, taken so far, not choosing. Choice in a word essentially is will. It may be incomplete

[1] This question is to some extent dealt with in a preceding article, Mind, N.S., No. 43.

[2] It would be well I think if those who maintain that they are so, would explain how much in psychology is *not* exceptional and unique. We have again, with a difference, the same experience of alienation and reunion when after suspense and doubt an idea is accepted as true. The conditions here, as we have seen, are partly diverse. It is here the not-self which first rejects and then reunites itself with the idea, whereas in will this is done by the self which is opposed to the not-self. The conditions and feelings in both cases may be called the same generically but not altogether. We shall once more notice this difference when we deal with the subject of Consent.

[3] The subject of disjunctive volition will be briefly discussed in the article following this.

volition in the same sense in which Resolve was incomplete will (MIND, N.S., No. 44), but a choice always and without exception is an actual willing.

(*b*) In the second place a choice must be made between at least two things which move me. It involves a preliminary suspension, however brief, and that suspension comes, at least usually, from conflicting desires. But choice always and without exception is between two or more moving ideas. I may indeed be ordered to choose before I begin to desire, and in this case the suspension may be said to start from the suggested idea. But the choice, when it takes place, takes place always in essentially the same way. The suggested idea moves me as I am moved by my own idea of an ulterior end, and in each case I have before me two opposite means which prevent instant action. The means in every case must be identified with the moving end, and, if you use 'desire' here in a widened sense, the means in every case must both be desired. The fact that apart from this identification they may be indifferent or even repulsive, does not raise really the least difficulty.

(*c*) We have to choose 'between' things, and the 'between' implies that one thing is rejected. To say 'take one' and to say 'choose one' are different requests. Unless the idea of rejection is implied, and unless for the chooser this idea qualifies the act, we cannot predicate choice proper. If in short the 'between' does not come or does not remain before my mind, I may take one out of a number but I most certainly do not choose it. But the 'between' may be present to my mind in various senses and degrees, and let us consider first an instance where it is highly developed and explicit. Here I desire an end to be realised in one of two alternatives which I recognise in that character. Each of these therefore is qualified to my mind by the exclusion of the other. I consider these first in relation to my end as contrary means to its attainment, and I then pass a judgment on both, and in consequence will one of them. But it would be absurd to contend that the whole of this is essential to choice. For there need be no judgment, there need be no idea of means in relation to end, and there need be no foregoing idea of an end. The essence of choice implies no alternatives in the sense of disjunctives, and I will now go on to seek the minimum which is really essential. In this minimum there must be two ideas which move me incompatibly so that neither is realised. In the second place I must not merely oscillate from one idea to the other, but notwithstanding their discrepancy I must desire

both objects at once. The main idea which moves me must be felt to be present in each, and it therefore, in relation to each, is a higher idea. If upon this follows my identification of myself with one of these objects, and so my volition, the act is choice if it is qualified by the idea of rejecting the other. If on the other hand any feature in the above account be wanting, I no longer in any proper sense have chosen. A child desires two lumps of sugar, and from some cause perceives that both at once are not possible. Each piece excites the pleasant idea of taking and eating, and both still do this when an attempt to take one piece has brought in, and checked itself by, the perception of losing the other. The impracticable 'both' which is desired is in fact the cause of a moment's suspension. Then through the pressure of appetite or from some other cause an action ensues, and the idea of taking now is actually realised. But whether the child has really chosen remains uncertain, and it entirely depends on the following condition. Was the idea of leaving one piece an element present in the act, or did for the moment the idea of this piece disappear simply? Choice in the latter case will be absent, while in the former it exists. There is choice because the idea, which acted, in the first place qualified both pieces, and then one piece with the aspect of leaving the other. And so much, I contend, is essential to choosing. On the other hand there is contained here no idea of an end with its means, and certainly no judgment that one piece is nicer or is wanted by me more.[1] To resume, when I choose I must have before me two ideas under one head, and one of these ideas, when I act, must be qualified as excluded or at least as absent. If I merely lose sight of one idea, I have not really chosen. Hence choice cannot appear below a certain level of mental development, and most obviously it does not constitute the essence of will. Choice is perhaps not reached at all except in the case of human beings.

I will go on from this to remark upon the meaning of Consent. Prof. James (*Psych.*, ii., 568) has used this term to express the ultimate fact in action and belief.[2] I have already explained how far I can agree to call such experiences ultimate, and I will now point out why in the case of either action or belief the use of consent is really

[1] Mr. Shand, in MIND, N.S., No. 23, pp. 301 foll., appears to me to have seriously misapprehended the facts on this point.

[2] I do not know if this was suggested by Lotze's use of *Billigung*, *Med. Pysch.*, p. 302. I have already remarked on approval, Mind, N.S., No. 44, p. 453.

indefensible. In the first place my consent is given always to a foreign force, and in the end it is given always to a foreign will. In the second place consent is not my mere awareness that something is to come from this will, but it implies necessarily that to some extent I am responsible for the result. If, where I might have hindered another's act, I have not attempted to hinder it, I may be taken as a condition of the act and therefore so far as its cause. On the other hand to call such consent my volition of the act would be too untenable. And Prof. James, excluding such tacit consent, finds the essence of will in the consent which is express. But while there is volition here certainly, so far as I will to express my consent, there is as certainly no volition of the act itself. And my consent never can amount formally to a volition of the act. Always in consent is interposed the idea of a foreign agent, and, however much by my consent I make myself a condition and so assume responsibility, I never, as consenting, am the real doer of the act in question. To give consent to an action, however expressly, stops short of uniting with another to will and to do it.[1] And consent is inapplicable to a common

[1] Consent can of course be given in such a way that it amounts to an incitement, and it can be given in such a way as to have the opposite effect. But these effects, I submit, go beyond and fall outside of a bare consent.

A further inquiry into the nature of consent is not necessary here, but the following remarks may perhaps be of service to the reader. The difficulty of defining consent does not lie merely in the uncertainty of the particulars, but attaches itself also to the general idea. Consent is a positive attitude of mind which must exist positively to a certain degree. But on the other hand that degree is determined only by negation and by omission.

Consent is a mental attitude of one agent towards the act of another. The first agent must be aware of the act, and up to a certain point must share the sentiment from which it proceeds. That point is fixed by the presence of abstention from resistance to the act as proposed or from attempt to nullify it if existing. As consenting I am dominated by a sentiment in accordance with the act, so far that either a feeling of hostility to it does not arise in my mind, or, if it arises, is prevented from carrying itself out. The result is that I do not oppose the act.

It is a further condition of consent that (*a*) the act must be taken by me as in some sense to concern me, and (*b*) some kind of opposition is in my power, or taken by me to be so. The act must fall within the region which I take to be the sphere of my will, and in this sense must interest me. And some kind of volition to oppose the performance or continued existence of the act is always possible here.

Consent must be distinguished from approval. Approval (*a*) extends beyond my personal concerns, and (*b*) involves some reference to a standard. In these two senses it is impersonal and disinterested.

Consent, in order to remain consent, must stop short at a certain point. If it becomes more than a positive state of feeling, measured

volition, because it implies that the actual will does not cease to be foreign. This idea of foreignness in the will from which the action proceeds cannot be removed from the meaning even of express consent. And hence as an expression for the essence of will consent is most inappropriate. My will is surely not the action of a foreign force in me, nor can it consist in my permission of such an event. Suggestions, we have seen, can in volition come before me as a not-self, but, if, starting from this, I do not go on to make them mine, I have assuredly not willed. And in the presence of a great alternative, where I adopt one course with all the energies of my being, and throw myself, as we say, entirely into the carrying out of one event, to insist that all I do is to give an express consent to this event somehow happening in me, seems really ridiculous.[1]

and defined by abstinence, and if it passes into an attempt to further the act or commit it in common, it has ceased so far to be mere consent.

It is obvious from the above that the positive state of consent itself is not properly an act and is not itself willed. It might itself be willed as a psychical effect, but as such it would be only the effect of a volition other than itself. On the other hand, the signification, to another or to my own mind, of my state of consent can obviously be willed. And that abstinence from opposition, which is one aspect of the consent, can itself again be willed. I can will to behave consistently as consenting without any ulterior end in view beyond this behaviour as following from the consent.

If on the other hand my behaviour, as consenting or again as signifying consent, is willed as a means to the performance of the act in question, I have (as we have seen) passed beyond simple consent. I now have furthered by my act the act of another, and may even have joined with him in committing it. And the result here will be no longer the mere effect of my consent; it will be that effect as contemplated by me and set before me as my end. The mere foreseeing by me that in fact the effect will follow must be distinguished from this; and the difference between the two lies in the nature and action of the idea which in each case is before my mind.

Thus, even in theory, the mental state of consent is not easy to fix, while in practice the difficulty seems well-nigh insuperable. The difficulty here lies mainly in knowing the exact nature of that to which at the moment consent is given. For the consent is given to something as it appears at one moment to the consenter, and as at that moment it is qualified by his feelings. But the exact nature of such an impression, as it happens in another, can be arrived at only by approximation and always presumptively. The difficulty again as to what is to be taken as and presumed to be a willed or unwilled indication or signification of consent, can only be disposed of roughly.

[1] The reason why Prof. James with all his insight is led to advocate this absurdity is, I venture to think, at once clear and instructive. Prof. James, as I have noticed before (MIND, N.S., No. 43, p. 297), seems to approach the facts of the soul with a mind too much dominated by

Consent, we have seen, does not go far enough for volition, but for belief on the other hand it goes a great deal too far. In the theoretical relation the object comes to me as something foreign, but I can hardly give consent to the object's being in character what it is. I accept the fact that the angles of a triangle are equal to two right angles, but to give my consent or permission is not in my power. It is a fact which I cannot help or hinder, and for which I have no responsibility. I can of course will the appearance of the truth in my mind, but I cannot will the actual truth itself to be this rather than that. The attempt would obviously at at once destroy my theoretical attitude. And even my attitude when I will to receive whatever is the truth in itself, cannot be defined as my express consent to that reception. For, if I actively will the reception, I do much more than consent to it. Consent in short for will is too little, and for mere belief is too much. Truth, I agree, is the satisfaction of a want in my nature, and the criterion, I agree, in the end may be called a postulate. There is no attitude in fact which is simply theoretical, just as there is no attitude in fact which is barely practical. But after all there is a difference between thinking and doing, and a difference which happily is ascertainable. And this ascertainable character on either side alike refuses to be described as consisting in consent.

We now approach a difficult part of our subject, the question how far in will the self enters into the idea of the change; and we may connect with this question a brief inquiry into the meanings of activity and agency. The reader, if he is unable here to accept our result, will, I hope, at least find matter which deserves his consideration. We have seen that the end of will, when that is completely realised, need not involve throughout the knowledge or even the existence of the agent. The necessity for my awareness in all cases of my own volition cannot in short hold except of the beginning of the process. As that process starts from

mechanical metaphors. What moves in the soul is forces external and foreign. And when in use such principles fail, and Prof. James sees their failure, instead of rejecting them as disproved he attempts to help them once again from the outside. My will is more than the resultant effect of foreign forces, and it is therefore something inexplicable which supervenes and is added from the outside at a certain point. And, being merely added, it does not and it must not transform the external forces. Hence the special virtue of consent, which on one side makes an assertion of myself, and on the other side still leaves the forces foreign.

within, I cannot fail to experience it and to know in some sense that the process is my act. But up to what point this knowledge and experience will accompany the process, cannot be laid down in general. If, that is to say, you take volition as the complete process in which my idea reaches its end, my awareness is certainly not throughout a necessary accompaniment of my will. My will, we have seen, may even extend beyond my existence.

This being dismissed, we may enter on a more limited inquiry, and may ask first whether and how far my self must enter into the content of the idea. The idea, we have seen, is always the idea of a change in existence, and certainly in some cases it is the idea of myself making this change. I as realising the end am in these cases an object to myself, and it is this idea of myself which here makes the beginning of the process. Now no one can doubt that such an idea is often present in will, and I am not concerned to deny that it is present usually. But I cannot agree that in will the idea does contain my self always, and I do not think that I as making the change must always be an object to myself in the idea.

This question taken by itself has but little importance. On the one hand volition is the identification of my felt self with the idea, and this felt self, we have seen, is so far never an object. And, so far as it becomes an object, the felt self so far is not the self which actually wills. Hence the presence or absence of my self as an element contained in the idea can hardly be vital. On the other hand, in every case after the process has started, my self must perceive itself to some extent as entering into this process, and to some extent therefore my self must in every case become an object to itself.[1] And for this reason again the question whether before the start I am an object to myself, does not seem in itself to be very material. But, since a confusion may give rise to dangerous consequences, the question, I think, must be briefly discussed.

I cannot admit that in all cases my self as changing the existence forms part of the idea's content. At an unreflective level of mind, whether in ourselves or in the lower animals, a suggestion, if it acts at once, need not be so qualified. The perception of another engaged, say, in eating or fighting may produce by suggestion these processes in me. And the result in such a case has on the one hand been certainly willed, but on the other hand the element

[1] This is a point to which I shall return very shortly.

of *my* fighting has not always been contained in the idea. An idea is present because the perception has for me qualified existence incompatibly with itself, and because this incompatible feature, opposed in me to the existing not-self, has then carried itself out. On the other hand the idea is not the idea of the fighting of *another*, for this aspect of otherness drops out before the idea acts in me. And the question is whether the idea, in thus coming to me straight from the perception and in dropping out, as is necessary, some portion of that perception's content, must in part replace that omission by the insertion of my self. I know of no principle from which such a result must in all cases follow, and, as I observe the facts, the result in many cases is absent. The idea of fighting is felt in volition to be *mine*, but it need not contain *me* as an element in the ideal content. Neither the other nor myself need actually appear in that content, though the idea of fighting, freed from otherness, must be in relation with my not-self and must be felt as mine. Then, as the idea realises itself, my felt self becomes in part also perceived, and in the actual process I acquire the experience of *my* fighting. And, if this is so, then in volition the idea is not always the idea of myself making a change.[1]

It is difficult to ascertain exactly what in any case is contained in the idea at the commencement of the process. For the process itself necessarily is perceived when begun, and in that experience the idea goes on to qualify itself further. When the idea of the change begins to realise both itself and me, I perceive myself as moving in one with the idea. I am aware of myself altering the existence so as to correspond to the idea, and in this union with the idea I become an object to myself. The idea thus develops and qualifies itself in a continuous process, and on reflexion we may naturally take its acquired character as there from the first. And it is easy in this way to assume that my self as acting is present always in the idea at its start. But though my self is thus present often, and I am ready to admit even usually, my self, we have seen, is not thus present always or

[1] We must be careful not to assume that at an early stage the perception of another's fighting comes to my mind as something belonging to another. The perception will contain something like 'fighting there,' and this, in becoming a suggestion, sheds the 'there,' and in the action is perceived as 'fighting here' or 'me fighting'. At a still lower stage the 'here' and 'there' become even less specified, but, as long as we can speak of will at all, there is an incompatible adjective which is opposed to existence and which in this sense is an idea.

even normally. Nothing is normal and necessary except that the idea of the change should be felt as in one with myself, and then that its actual process should be perceived as my making the change. My self in short, as making the change, is not in fact always preconceived in the idea, and, whether this takes place or not, it is in every case external to the essence of will.

A confusion on this point may threaten danger to our whole doctrine of volition. "Your view," I may be told, "is entirely circular and so illusory. All that you have done is to take the fact of will as an unexplained mass. You then transfer that mass in idea to the beginning of the process, and the process therefore naturally appears as the realisation of this idea. But the idea simply anticipates the actual process in an unexplained form, and you have therefore offered in fact no explanation at all. For it is will, you say in effect, when with will we have the idea of it beforehand." But such an objection need, I think, not cause any serious embarrassment. We do not in the first place admit that my self as acting must in fact be contained in the idea. And, even if we admitted this, the conclusion which would follow really matters very little. For the conclusion which would follow amounts merely to this, that my perception of agency must come before volition in the proper sense of that term. This priority would however make little or no difference to our main result. The idea of a changed existence is suggested, is felt as one with me, and so carries itself out. And this process gives me, as we laid down, the experience of my agency; but the process so far, on the present hypothesis, would not amount in the strict sense to volition. On another occasion however this perception of my agency, which now is acquired, will or may be transferred to the idea as an element in its content. And the result will now follow from an idea which has been qualified as required, and the act will therefore now have become a volition proper. Hence, even if we accept a view which I submit is mistaken in fact, the alleged circle in our account is really non-existent or harmless.

In volition I must have, and must be conscious of, an object not-self, and I must be conscious again of an object idea. With that idea I must feel myself in a special sense to be one, and the idea must be qualified in its content by its relation to the not-self. Then, when the idea realises itself, I perceive myself also as moving in the same sense, and up to a certain point in this movement I am an object to myself. And my self again in many cases, before the

idea has even partly realised itself, is contained as an element in the content of the idea. But at the beginning of the act my self is not always so contained. And after a certain point the process, we have seen, may wholly pass beyond my knowledge and being.[1]

Then is the idea of agency, I may be asked, not essential to will? This idea in my opinion is present usually, but I do not think that it is essential, and I even think that in some cases of will it is absent. We always experience the process, when it happens, as our agency, but, before the process happens, agency is not a necessary element in the idea. In other words the idea of an altered not-self, I think, is enough, even if that idea does not contain the feature of an active altering. Let us suppose that at an early stage my self in some point has been expanded into the not-self, and let us suppose that, without experiencing this process as an act, I have perceived it as a change in which my self has flowed over into the not-self. Let us again suppose that later this same change is suggested in idea, and that myself is felt as identified with this ideal change. The process which follows and realises this idea will be experienced as my agency,[2] and this process, I submit, is also an act of volition. On the other hand the element of agency was not present beforehand in the idea. And if the process, being without such an element in its idea, is denied to be volition, this to myself, I would repeat, matters little or nothing. The process in any case will give at least the perception of agency, and on the next occasion that element, having now been perceived, will tend to qualify the idea.

"But it is the perception of agency," I may probably be told, "which is here really in question. Agency and the experience of it are things one or both of which are ulti-

[1] We may ask whether the idea, *before* it realises itself, need even be the idea of *my* future state. The idea must be felt inwardly as mine, and it must qualify the not-self which comes to me and which so far qualifies me. The idea must thus in its content be the idea of a change in me. But, if you ask whether the idea is that of a change in myself as distinct from others, the question is different. The doubt is whether a change of my not-self, even where my not-self is in felt opposition to an idea felt as mine, must therefore be qualified in the idea as a change of myself as distinct from other persons or things. And I cannot maintain the affirmative here. But, since the idea in its actual process at once goes on to qualify itself, the inquiry, as I have explained in my text, seems to have no importance.

[2] It will be so experienced, that is, except under certain conditions discussed later in this article.

mate, irreducible and unique, and in this inexplicable fact is contained the real essence of will. To make will consist in the perception or in the idea of this fact is really circular. And once more the perception like the fact is irreducible and ultimate."[1] Now, to confine my reply first to the objection based on the perception of agency, I am not concerned here to deny that such an experience is 'original' and 'ultimate'. Whether anything in our development precedes the practical relation, and, if so, what precedes it, is a matter with which I am not here undertaking to deal. But I maintain that apart from the practical relation there is no will nor any perception of agency, and I insist that in this relation certain elements are essentially involved. And where these are wanting I utterly deny the presence of an experience of agency. On the one hand I do not assert that the elements can exist apart or that they precede the relation, and on the other hand I do not even maintain that with these the whole experience is exhausted. My perceived agency will contain usually, or perhaps even always, some pyschical matter which I am not here attempting to detail. But this matter in my opinion most certainly is not essential, though it may give what may be called a specific character to the experience. What is essential is the presence of those several aspects which I have repeatedly described, and, where you have not these, you have not in fact, I contend, the experience of agency. But, in calling these aspects the essential conditions of the experience, I imply no conclusion with regard to their priority in time.

I will pass from this point to consider another mode of objection. "The experience of agency," it may be said, "falls outside your account of it. We might on your account of the matter perhaps perceive a change happening to the not-self, and we might also perceive a change happening to ourselves, but with this we should never get to perceive ourselves as making the change." But for my part I cannot understand how this perception could fail. I feel myself one with the idea of a changed not-self, an idea opposed to the not-self which actually exists. And, as this idea invades the not-self, I feel and I perceive that my self is expanded. The change of the not-self is perceived as my process of expansion, in which both that existence and myself become in fact what ideally I was. We have a change of existence beginning with its idea in myself and itself really ending in

[1] I do not mean to imply that this objection as it stands would be offered all at once by the same person.

that which was ideal. This moving idea is felt in one with myself, and my self thus is felt and is perceived as becoming actually itself.' The process is experienced as beginning from within and as going continuously outwards. And surely with this we must in fact have attained to the essence of agency.

There are fundamental difficulties, I admit, which I must here leave untouched. The perception of succession in general, and the qualification in any process of the beginning by the end, offer well-known problems which here it is impossible to discuss. And the same remark holds, we may add, of every kind of predication. But these difficulties do not attach themselves specially to the perception of agency in the self. They apply equally to the experience of any change in outward existence. And these difficulties, if so understood, furnish no ground for objection against our doctrine of will. Such an objection is not grounded unless these ultimate questions are answered in one special manner. It is possible to hold that in the self there is an agency which the self knows in that character, and that this self-conscious agency, while inexplicable itself and the essence of will, serves to explain our perception of process in things, and meets the difficulties which attach themselves to predication in general. I consider any such view to be untenable and to be in conflict with fact, but I cannot undertake the discussion of it here. Whatever plausibility it may possess comes I think from its vagueness and from its inability to realise the conclusions to which its principle would lead.[1] We must not confuse with such a view a doctrine which differs from it vitally. This doctrine is alike in holding agency and will to be itself inexplicable and ultimate, and to be on the other hand the main principle which explains experience. It would however deny that this principle in its working is aware of itself. Or, if aware of itself in any sense, the principle is at least not aware of itself in its own proper character. If the agency in short is a 'fact of experience,' it is nevertheless not experienced in fact as an agency. Such a principle however, it may be urged, is the real essence of volition. Once again it is impossible here to discuss such a doctrine, but such a doctrine may at once be dismissed as here irrelevant. For in these papers, I may remind the reader, I am merely concerned with what we experience as will. If indeed from such a principle you could account for this our actual experience, the case, I

[1] The appearance of Prof. Münsterberg's interesting volume since these words were written has not inclined me to modify them.

admit, would become very different. But for any satisfactory explanation on this head we should seek assuredly in vain. And we are really not concerned here even with 'a fact of experience' except so far as it either itself is an experienced fact or serves as a principle by which experienced facts are explained.[1]

It is better to leave an objection which, however fundamental, is far too vague to be discussed briefly, and I therefore will state in a concrete instance the former more definite argument. "I may have a pain," it may be objected, "and the idea of its relief, and I may experience the tension of that idea against existence and may feel myself one with it. Then when the idea is realised I may experience, in and with this change of the not-self, a great expansion of my self. And yet with all this I may gain no perception of agency."[2] But this is so, I reply, because the conditions are not fulfilled. The process is perceived as beginning from the not-self and as merely happening to me. Either from a general habit or from the presence of some particular cause, the change does not come to me as starting from the idea in me. The realisation of the idea on the contrary appears to begin with an independent movement of the not-self, and the process therefore naturally is viewed as the process of the not-self. I have the idea of relief and yet actually the pain remains. The idea changes in strength and fulness, and generally in the way in which it occupies my self, but on the other hand the pain remains unaltered. There is therefore no acquired tendency to connect actual cessation of the pain with its idea. On the other side not only may the pain have ceased when the idea has been absent, but it may have ceased also when some prominent change of the not-self has been present, and this experience may have happened to me more or less frequently. We have therefore not only the absence of any acquired tendency

[1] I may refer here to MIND, N.S., Nos. 33 and 40. I have noticed for some years an increasing tendency in England to do what I must call to coquet with the doctrine of the "primacy of will". I do not, I trust, undervalue the lesson which is to be learnt perhaps most readily from Schopenhauer. But that lesson, I am sure, is much less than half learnt if we do not realise the difficulties which arise from anything like a whole-hearted acceptance of the doctrine. Prof. Münsterberg's important work should here prove instructive. I hope also that Mr. Schiller's essay, contained in *Personal Idealism* (which I have seen since writing the above), may in its way be useful, though one would seek in it in vain for any serious attempt to realise the meaning and result of that gospel which it preaches.

[2] Compare the remarks on Expectation, MIND, N.S., No. 44, p. 442.

to connect the change with the idea, but we may have a contrary tendency to view the change as beginning from the not-self. And this order again may be in general the more familiar way of our experienced world.[1] If then, in any particular case of relief from pain, there is nothing to suggest specially that the process has begun from the idea, we naturally fail to experience ourselves as active. And this failure is a consequence which serves to illustrate and to confirm our doctrine.

Let us now suppose on the other hand that the facts are altered. Let us suppose that relief from pain comes habitually when the idea of it is present, or when that idea to a certain extent has inwardly prevailed. And let us suppose that the respective increase and decrease of the idea and of the pain are in general related inversely. Under these conditions we should tend, I submit, to view the relief as ensuing from the idea, and in the process, when it happened, we should gain a perception of our agency. The relief in fact really might arise from another unperceived cause, and our perception of agency would in this case contain an illusion—the same illusion which on one view makes the essence of all experience of will. But, whether illusory or otherwise, the perception, I contend, would arise from these conditions, in the absence, that is, of other conditions which are hostile. If a suggestion is made to me that relief from pain comes from the idea, if this suggestion is not qualified in my mind by anything alien or foreign, but remains with me as a simple connexion of my ideas,[2] if then in the presence of the pain I have the idea of its relief, and the idea is realised in the actual cessation of the pain — under these conditions I shall experience agency and will. The experience may be illusory, we have seen, but that point is irrelevant, or, so far as relevant, it is not an argument against our view. For we are asking merely

[1] A change ensuing on, and continuously following from, motion of some object not my body, tends in general to be attributed to that object and not to myself. On the other hand the origin of motion in my body, as coming from myself and proceeding outwards, is, I presume, the main source of our experience of agency. The perception of agency in my outward world, I should agree, is transferred, but, though transferred, it may have become a more familiar and natural way of apprehension. I do not however mean by this to imply that our experience of the order of the outward world begins with such a transferred perception of agency.

[2] This proviso must be emphasised. If there is anything about the idea which makes it other than my idea simply, the act will so far not be experienced as my will. See the preceding article, No. 44.

as to the elements which are essential to our experience of agency.[1]

We have so far supposed as one of our conditions a special acquired tendency, a disposition, that is, to join the relief with the idea as following after it in time. But such a particular connexion I think is hardly required. In any particular case a present emphasis may have the same effect as repetition and past conjunction. If, that is, the idea of relief is first opposed to the actual pain and is then realised, and if this experience throughout is prominent and is felt emphatically, we might, even in the absence of an acquired connexion between the relief and the pain, experience the process as our agency and will. I assume of course that there is nothing in the case to suggest the activity of the not-self. But it is not worth while to insist on a point which perhaps bears but little on our general doctrine. The reader will have understood generally that I am not offering an account of our psychical development, or on the other side am attempting an exhaustive analysis of the facts. There are psychical features, I would repeat, in our experience of agency, which, because I think them unessential, have been omitted altogether. And in the development of this experience the changes of my body, felt and later perceived in their felt unity with myself, are obviously a factor of primary importance. But our inquiry here must be limited to points which seem essential to the definition of will.

Before I pass from the subject of our experienced agency

[1] An unbiassed inquiry into the conditions under which we get an experience of activity and passivity is a thing which, so far as my knowledge goes, is sorely wanted. I cannot think it satisfactory that two competent psychologists should in the case of some psychical process be clear, one that the experience of activity is there, and the other that it is not there. I cannot myself approve when I see such a difference end apparently with two assertions. But for myself, even if I were otherwise fitted to undertake this inquiry, it is plain that I could not be regarded as unbiassed. In the main however, and subject to some necessary explanation which is given below in this article, I find that the presence of the experience depends on an idea. If, for instance, my imagination is excited and I perhaps desire to sleep, I can view myself at pleasure as freely active in my imagination, or again as passive and constrained by the activity of a foreign power. And, as I view myself, so also I perceive and I feel myself. Similarly in a carriage or in a train I can regard and can perceive the movement as my act, or again as an alien force that actively sweeps me away either as merely passive or as unwilling. And I can even mix both experiences and can feel that it is at once my act and is also my fate which is taking me in each case to its end. The whole matter, I submit, is one for an unprejudiced inquiry, and I will venture once again not without hope to recommend this conclusion. *Cf. Appearance*, p. 605.

I must direct the attention of the reader to a remaining difficulty. Wherever you experience agency in the proper sense, there you have the experience of volition. Hence, if anywhere you perceived yourself as an agent in the absence of conditions which we have defined as essential to will, such a fact clearly would destroy our definition. Now, if we make no distinction between an awareness of activity and of agency, a contradiction of this kind is likely to arise, and I must therefore offer at once a brief explanation on this point. The question is however too fundamental to be discussed here in an adequate manner.

I will begin by noticing a doubt which may be forthwith dismissed. It might be contended that for an experience of activity and passivity it is not necessary to be aware of an other or not-self. But, when the not-self is understood so as to include my existence, so far as that existence is opposed to my idea, an objection of this kind at once loses plausibility.[1] We may therefore, leaving this, return at once to the more serious difficulty. If there is no difference in my experience between activity and agency proper, and if my experience of activity is possible without the presence of an idea of change, then it will not be true that an idea is essential to volition. And I will now proceed to draw out and to explain this objection. "Even when idea is understood," it may be urged, "as you have understood it,[2] I may perceive myself as active where no such idea can be found, or at least where no such idea carries itself out in existence. For I may perceive my self as it expands against and into the not-self, or again as it is contracted when the not-self advances into me. And this expansion or contraction may be experienced as my activity or passivity, without the presence in either case of any idea which realises itself. If my self is written as AB and the not-self as CD, we may perhaps at first write their experienced relation as AB | CD.[3] Let us now suppose

[1] On this point see above, p. 150.

[2] MIND, N.S., No. 40, p. 5, and No. 44, pp. 460-462.

[3] These symbols of course are miserably inadequate and may even mislead. I however offer them to the reader who is prepared to make the best of them. The vertical line which divides these groups of letters is of course not to be understood as distinguishing in the ordinary sense "subject" from "object". The division holds merely within the content which is experienced in my whole self, and it is meant to distinguish those features in the object-world which oppose and limit me, from the rest of my world, whether object or not, with which in feeling I am one. If we suppose a part of my body which for the moment is out of gear, and so prevents my ordinary feeling and perception of self, and if we then suppose that this restriction of myself

that this experience is changed to ABC | D, and that the process of this change, of myself from AB to ABC and of the not-self from CD to D, is perceived by me. And let us suppose also that there is no suggestion of this change having arisen from the not-self. In this case I become aware of myself as changing outwards from a narrower to a wider self, a self that has become more than what it was, and has become this at the expense of the not-self. The process into the not-self, if so, is referred to myself as a further quality; and experienced pleasure, though not essential, would contribute to my so taking it. There is here on the one side no foregoing idea which carries itself out, but on the other side there arises a perception of myself as active. So in the same manner my experience may change from AB | CD to A | BCD, this change being perceived as the invasion of me by the not-self. And here once again there will be no idea which realises itself in the result. Hence without any such idea we have the perception both of passivity and of activity, and it therefore is false that without an idea there is no experienced agency or will."

I can identify myself largely with this objection but I cannot endorse it altogether. I do not think that in the absence of an idea I could possibly attain to the experience of agency. I should not under the described conditions either perceive myself as doing something or as having something done to myself. But if activity and passivity are used in a lower sense which stops short of agency, then under the above conditions I might be aware of myself as active or passive. And I should not myself object to the use of activity and of passivity in such a lower sense, at least so long as confusion is avoided. My perceived self-expandedness in what before was the not-self may thus, unless for some further reason the process is taken as beginning from the not-self, be regarded as the perception of my activity. And on the other side my self-contractedness, when my self is seen to become in part the not-self, may be an awareness of passivity; so long, that is, as the result is not made to appear as beginning from my self. And in neither case will such an experience involve an idea, an idea, I mean, which carries itself out in the result. But such a lower activity, whether on the side of my self or of the not-self, must be clearly understood not to amount to agency. It is not agency at all, that is, so long as it remains

is removed, such an example may perhaps explain the general sense of our symbols. Unfortunately with the restriction and enlargement there goes also a qualitative change.

simply in its own character. On the other hand it tends naturally to pass beyond itself and to become the experience of agency by a process of construction. And, since this tendency serves to obscure the distinction, I will ask the reader to pause and to consider its nature. The subject of the experience has perceived in fact merely his own expansion into the not-self, or on the other hand the inroad of the not-self into his being. The process so far begins from one side of the relation, and in that character is regarded as belonging to that side. And with so much, I would repeat, we have not the perception of agency, since the process is not viewed as coming out of that which in its result it qualifies. But it is natural for the subject himself, or again for an outside observer, to make the addition wanted to produce the perception of agency. The result is transferred in idea from the end to the beginning, and qualifies that beginning as an element which lay within it and issues from it. And with this we now have agency and will in that character which our definition has ascribed to it. The above construction may be erroneous and may more or less misinterpret the facts, but at least in the subject of the experience it may develop itself into an actual perception. What was first perceived was in fact no more than a self-expandedness, and it is the presence of the idea by which it has now become a perceived self-realisation and agency.

It may be instructive to dwell for a time on the above sense of activity and passivity, a sense in which as yet they do not imply agency and will. We must distinguish this again from feelings which, whether in idea or in actual time, are anterior to perception, and which in any case do not pass beyond their own lower level. These feelings of activity and of passivity of course exist at all stages of our development, and in some sense each, I should say, precedes its respective perception. But neither is in itself an experience *of* passivity or activity, if this means that, confined to them, we could be said to have any knowledge of either. Our first perception of activity or passivity goes beyond and is distinct from such feelings. It gives us the knowledge of something in the character of being active or passive, though this something is not yet qualified on either side by agency. I perceive myself first as passive when a change in myself is referred to the not-self as its process, when, that is, I become different and the object not-self becomes different, and the alteration is perceived as the increase of the not-self in me. This experience does not imply so far my practical relation to the object in the sense of my striving against its invasion.

And again it does not imply agency on the part of the object. That agency and my struggle, I repeat, may perhaps in fact exist, but they are not contained so far as such within my experience. And I have feelings and those feelings may more or less qualify the not-self, but, once more, not so as to produce a perception of agency. We may find an illustration in my state as theoretical or perceptive. Where knowledge develops itself in me without effort or friction, my experience even here is very far from being simple. But my attitude, so far as I tranquilly receive the object's development, and so far again as that development is not viewed as its agency, is an example of what we mean by simple passivity.[1]

And we have a perception of activity which remains on the same level. In this, as we saw, I perceive my self to be enlarged at the expense of the not-self. But whatever feeling may accompany and may qualify this process, I do not perceive the not-self as striving or myself upon the other side as doing something to this not-self. Thus, in my theoretic attitude again, the unknown existence is beyond me as a not-self, and my knowledge of it can come to me as an expansion of myself at its cost. And yet my attitude so far involves no experience of resistance or of agency. We found another instance in what I may perceive on relief from a pain, although the cessation of the pain is not viewed as my doing. And we saw that activity and passivity in this lower sense are turned by a small addition into that which implies agency and will.[2] This addition in each case consists in an idea of the result, an idea which going before carries itself out in the process.

These subtleties, however wearisome, cannot I think be safely neglected. We have often what may be called an

[1] I refer to that state of mind in which the object comes to me as something which *is*, without my feeling at the time that it is *doing* anything to me, or I to it or again to myself.

[2] If we imagine a dog beginning to run, we may suppose that with this he gets at once a perception of activity (*Cf. Appearance*, p. 606). His experience however at first need not amount to agency proper. But the perceived expansion of self into the not-self will tend naturally to become an idea, and that idea of the result will tend to precede and to qualify beforehand the process. And, with such a self-developing idea of a changed not-self, the dog would have forthwith the experience of agency. The same ideal construction can of course be also made from the outside by a spectator, and can then be attributed, perhaps falsely, to the actual subject of the process. In the passage of my book to which I have just referred I have not distinguished between the two senses of activity referred to above.

awareness at once of both activity and passivity; but to take the two always here in the same sense and as exactly correlative might involve us in confusion and in serious difficulty. The practical attitude, we saw, involves in itself the attitude of theory, and without the perception of an object no will is possible. Now as receptive of such a not-self I have a sense of passivity, and we may regard this sense as in some degree present in will. But in will to take this perceived passivity together with our perceived agency as at one and the same level of meaning, would not be defensible. It would be a mistake which might lead us to dangerous results.

Before I pass from this subject I must return to a final difficulty. "It is impossible," I may be told, "anywhere to understand activity in a lower sense, for activity and passivity are inseparable from agency both in fact and in idea. The distinction of self from not-self depends on the full practical relation, and apart from this relation there is neither in idea nor in time the possibility of an experience of anything lower." This is an objection which obviously goes too far to be discussed in these pages, but I can at once make a reply which I consider to be here sufficient. The reader is at liberty to assume here for the sake of argument that our experienced distinction of self from not-self comes into existence with and in the experience of agency and will. I could not myself admit that before this distinction there is no experience at all. But for the sake of argument I will admit that the practical relation, with its experience of agency, is the beginning of that consciousness which distinguishes not-self from self. Such an admission, I would however add, agrees perfectly with our doctrine. The practical relation still maintains that character on which we have insisted, and it involves always the self-realising idea of a change. On the other hand we find in fact a lower perception of activity and passivity, just as in fact we still must find our theoretical experience and attitude. And such a consequence need entail no confusion or discrepancy. The practical relation, together with experienced agency, will be there from the first, and will remain the condition of our experience of any relation between self and not-self. But lower experiences of that relation may none the less actually be present. They will be present either as degraded forms of the practical relation, where one or more of its aspects have vanished in fact; or they will exist within the practical relation as dependent and subordinate features of that inclusive whole. In the latter case they will be abstractions on

which our attention and our one-sided emphasis bestows the appearance of a separate existence. But this is a point with which for our present purpose we are not further concerned. And when this reply, together with what precedes it, is fairly considered, the objection to the use of activity in a lower sense may, I hope, be removed. And it will be impossible from this ground to argue against the presence of a self-realising idea in our experience of agency.

I will end our inquiry into this difficult point by reminding the reader that in one sense I attach to it no great value. We have, I think, a natural tendency to make use of activity and of passivity in cases where the experience of agency is absent. And for myself I am ready to permit within limits and to justify this use, but on the other side I am also ready to condemn and to disallow it. But in the latter case, if we may not distinguish between activity and agency, we must at least distinguish both from a lower experience. There will be an experience, such as we have described, which falls short of agency, and which, if it is not to be called active and passive, must at least in some way be recognised. This lower experience, if left unrecognised in fact, becomes a dangerous source of confusion and mistake; but on the other hand the name which we are to apply to it is a matter of secondary concern.

We have now discussed the sense in which the self in will is identified with an idea, and in connexion with this have inquired into our experience of activity and agency, and we have asked how far these two should be regarded as distinct. Our space has been too short for a satisfactory treatment of such problems, even if otherwise such a treatment were within my power. There remain various questions with regard to the practical relation and its opposition of the not-self to the idea and to the self. I can however do no more here than notice some points in passing. (i.) In the first place this opposition is, I should say, in no case motionless and fixed. The idea, if it does not at once realise itself, will ebb and flow, and, as against the not-self, will at its boundary more or less waver. There will be a constant movement, however slight, of passing forward into fact and of again falling back. (ii.) The opposition of the not-self may again be so transitory and so weak that it fails to give us in the proper sense an awareness of resistance. The existence to be changed by the idea may be more or less isolated. It may find little support in any connexions with the self and the world, and its strength may be said to con-

sist in its own psychical inertia.[1] And the extent of the existence and the inertia may be inconsiderable. In other words the resistance to some special change may be no more than a resistance to change in general. But this resistance, it is clear, may in some cases amount to very little. (iii.) We may have in volition a forecast and an expectation of the result, and this may be strong and may be definite in various degrees. And in some cases its strength and detail may tend to overpower the actual fact. The idea may, before the act, so prevail against the perceived existence as in part to suppress my experience of activity against an opposing not-self. I do not mean that this experience can in will be wholly suppressed, but it may be reduced in some cases to an amount which is hardly noticeable. In brief within the act of volition our experience is both complex and variable, and to try to enter on these variations would be a lengthy task. But everywhere the main essence of volition remains one and the same, and that essence, I venture to think, has been described by us correctly.

In the next article I shall discuss the alleged plurality of typical volitions, and shall briefly deal with errors which prevail on the subject of aversion. Then, after disposing of some minor points, I shall finally inquire how and by what means the idea comes to realise itself in fact.

[1] I shall return to the subject of inertia in my next article.

II.—RECENT WORK ON THE PHILOSOPHY OF LEIBNIZ.[1]

By B. Russell.

The philosophy of Leibniz, his merits and demerits, and his place in the history of thought, have been hitherto universally and completely misunderstood. This is to be accounted for partly by his sheer intellectual greatness, partly by the ignorance of editors, partly by his lack of leisure to compose a *magnum opus*, and partly also (it must be confessed) by his utter lack of moral elevation. This last cause led him to publish by preference his worst writings, to ruin the consistency of his system for the sake of orthodoxy, and to mislead the world (after his unsuccessful experiment with Arnauld) as to the grounds of his metaphysical tenets. Among the papers which he left unpublished, there is contained much that has a far higher value than any philosophical treatise that he permitted the world to see. But here the editors become to blame. M. Couturat shows that a whole mine of the most valuable material has been left untouched by Erdmann and Gerhardt, and that many opinions and methods, which had been known only in isolated fragments, belong really to systematic and life-long attacks on fundamental problems. No man more often or more gloriously than Leibniz missed a unit by aiming at a million. And if he failed to compose a *magnum opus*, M. Couturat shows that this was due to the vastness of the enterprise that he undertook—an enterprise surpassing the powers of a single man, but never assisted, in spite of urgent appeals, by any of his contemporaries. His philosophical successors, too, have smiled at his projects, until at last the mathematicians, if not completely, yet in a very large measure, have unwittingly realised them.

For the true understanding of Leibniz, M. Couturat's work is of the very first importance. It is based upon an extensive study

[1] *La Logique de Leibniz d'après des documents inédits.* Par Louis Couturat, clargé de cours à l'université de Toulouse. Paris: Alcan, 1901. Pp. xiv., 608. *Leibniz' system in seinen wissenschaftlichen Grundlagen*, von Dr. E. Cassirer. Marburg: N. G. Elwertsche Verlagsbuchhandlung, 1902. Pp. xiv., 548.

of unpublished manuscripts, to which was brought, what is absolutely essential, a wide and thorough knowledge of modern mathematics—Symbolic Logic, Arithmetic and Geometry. Without such knowledge, it is impossible to appreciate the merit of attempts which have not succeeded, to know why they failed, or to realise that success was possible and of the highest moment. Three objects are served by M. Couturat's work. The first, which he mentions as the chief, is to show that "Leibniz's metaphysic rests solely upon the principles of his Logic, and proceeds entirely from them" (p. x.). The second is to set forth precisely what his Logic was, and the third is to show its connexion with the various projects of a universal characteristic, a universal language, a universal mathematics, etc., which Leibniz cherished throughout his life. In all three objects, as it seems to me, although some of the principal conclusions absolutely contradict received opinions, the work is completely successful. Perhaps the most revolutionary conclusion in the whole book is, that the principle of reason, for all its trappings of teleology and Divine goodness, means no more than that, in every true proposition, the predicate is contained in the subject, *i.e.*, that all truths are analytic (p. x.). In face of the evidence adduced, this conclusion, startling as it is, appears to be quite irrefutable.[1]

The work is divided into nine chapters, dealing respectively with Syllogistic, the Ars Combinatoria, the Universal Language, the Universal Characteristic, the Encyclopædia, the Scientia Generalis, the Universal Mathematics, the Logical Calculus, and the Geometrical Calculus. All these projects are shown to be interconnected, and to spring from a common logical root. Some have been proved by time to be chimerical, while others—notably the three last—are now actually constituted, two of them very much as Leibniz endeavoured to constitute them. The common logical source of his doctrines consists, as M. Couturat points out, of two postulates: (1) All ideas are compounded of a very small number of simple ones, forming the *Alphabet of human thoughts;* (2) complex ideas proceed from these simple ones by a uniform and symmetrical method of combination analogous to arithmetical multiplication (p. 431). Both these postulates are of course false; but while in some regions their falsity is disastrous, in others it is only unfortunate. Two other errors, less fundamental, but perpetually recurring, are pointed out by M. Couturat, and are attributed by him (p. 438) to an almost unconscious respect for Aristotle. The first of these, which was only a defect of method, consisted in a preference for taking syllogisms in intension rather than extension; the second, which rendered Leibniz's attempts to found the logical calculus abortive, was the failure to realise the fallacy in such moods as Darapti and in the scholastic doctrine of

[1] In my *Philosophy of Leibniz*, chap. iii., I gave a different interpretation, which M. Couturat's work has persuaded me to abandon.

conversion and subalternation, which results from wrongly assigning existential import to universal terms (pp. 32, 348 ff.). These errors are already set forth in the first chapter, together with certain technical improvments which Leibniz suggested in the treatment of syllogisms.

The second chapter deals with the *De Arte Combinatoria*, which Leibniz published at the age of twenty. The art suggested consists in analysing all concepts by reducing them to simpler concepts, until at last we reach certain simple indefinable concepts: these will be the terms of the first order. Every composite term will then be represented by the symbolic product of its constituent simple terms, which will constitute its definition. The predicates of a term are its factors, and the subjects of which it can be affirmed are its multiples. Here already, as M. Couturat remarks (pp. 48-49), we find Leibniz's leading ideas.

The third chapter points out that the characteristic was at first conceived by Leibniz as a universal language, not as an Algebra. This language was to be simple, because it was to be based on a logical foundation, *i.e.* on a complete analysis of concepts: for every simple concept there was to be a symbol. When he first hoped for an Algebra of thought, he identified this with his universal language. This was his view in 1676; but four years later he distinguishes his language from every kind of Calculus (pp. 61, 78). He had a device by which the syllables of a word could be permuted without change of meaning; this, he says (p. 63), would give great facility for verse or music. enabling very beautiful songs and poems to be composed by an infallible and quasi-demonstrative method! For the purpose of his universal language, he undertook a grammatical analysis. He rightly decided that inflexions are to be avoided as far as possible, and that the philosophic language should be analytic. Nouns, he says, express ideas, while verbs express propositions, and particles (though this is not so clearly said) express relations (pp. 69, 71, 72). Besides adjectives and particles, he says, we require only one noun, *ens*, and one verb, *est*. He has great difficulty in the treatment of the genitive, and in other forms involving relations not reducible to predication. In all his grammatical analysis, he has a logical purpose, namely the justification of the asyllogistic inferences which he had learnt to study from Jungius. Two types of these occupied him, namely the inversion of relations (David was the father of Solomon, therefore Solomon was the son of David), and inferences from the direct to the oblique, such as: A horse is an animal, therefore the head of a horse is the head of an animal (this is not Leibniz's instance, but, I think, Jevons's). His grammatical analysis. as M. Couturat remarks (p. 437), gave him the materials for a logic of relations; but out of respect for scholastic tradition, he regarded these materials as *merely* grammatical, and made no logical use of them. Thus he was unable to symbolise the above two types of inference, of

which, we may observe, the true statement is the following: (1) If x has to y the relation R, y has to x the converse relation; (2) if all a is b, every term having the relation R to an a has this relation to a b. Leibniz's grammatical studies suggest the reflexion, recommended also by many more general considerations, that philosophical theories of Logic have far too much neglected grammar, and that the endeavour to represent actual sentences in accordance with received doctrine would long ago have revealed the importance of many neglected points. Leibniz appears to me to be right in holding that the verb conceals the inmost essence of the proposition, and even of truth itself; but the necessity for particles in his language ought to have shown him the falsity of the subject-predicate logic. Philosophical grammar appears to be a subject of the highest importance; but, like all other subjects, it has been most shamefully neglected.

The construction of a universal language, we saw, was to be based upon the "Alphabet of human thoughts"; but this required an analysis of all concepts and an inventory of human knowledge. The latter was to be the Encyclopædia; the former would give the materials for the universal characteristic. These two projects thus developed out of the attempt to construct a truly philosophic language (p. 79); and neither could be carried far without the other, since the characteristic requires the reduction of all scientific notions to a logical system, which is the work of the Encyclopædia, while this in turn presupposes a determination of the order of scientific truths, which depends upon the characteristic. For this reason, both must be developed and perfected together (p. 80).

Chapter iv. explains what the characteristic was to be. It was to consist of a collection of signs which not merely represented ideas, but were to be positive aids to reasoning, like the symbols of Arithmetic and Algebra. Indeed, the characteristic was actually to replace the necessity of reasoning by rules for the manipulation of signs (p. 101). Leibniz attached so much importance to the invention of proper symbols that he attributed to this alone the whole of his discoveries in mathematics (pp. 83-4). In this high estimate of symbolism, those who have profited by modern Symbolic Logic will be inclined to agree with him; while the bulk of the learned world will probably continue to agree with Tschirnhaus, who wrote that he saw no utility in the invention of the Infinitesimal Calculus, and that the introduction of new notations made the sciences difficult (p. 86). The Characteristic was to apply to all strict reasoning, and was to be especially useful in philosophy, where (as Leibniz most justly observes) rigour is more essential than in geometry, because errors are less easily detected (p. 93, note). Leibniz allowed several parallel symbolisms for his logic—arithmetical, algebraical, geometrical, and even mechanical—for all rational sciences must "symbolise" with each other (p. 116). This rather difficult expression means, I fancy, that, by

giving different meanings to the symbols, a given symbolic proposition may be interpreted as a true proposition in any one of these sciences—a procedure of which there are innumerable instances in mathematics.

The most ambitious and the most chimerical of Leibniz's schemes was the Encyclopædia. This was to contain the whole body of human knowledge, historical and scientific, arranged in a logical order, and following a demonstrative method. It was to begin with simple and primitive terms, and Euclid's Elements were to be its model; finally, a small number of principles would suffice for the foundation, and thus the sciences would be abridged as they grew (p. 152). This task, even Leibniz had to admit, surpassed the powers of a single man, and for its fulfilment he wished to found an "Imperial German Society"; all his plans for the foundation of Academies are connected with the Encyclopædia (p. 127 and Appendix iv). Originally, theology and law occupied the place of honour in the Encyclopædia; but after 1679 logic was to be immediately succeeded by mathematics and physics (p. 129). Two causes, we are told (p. 175), prevented the accomplishment of the work—the lack of time, and the failure to find collaborators. Surely we may add the inherent impossibility of the task; for here Leibniz's panlogism, his belief in the possibility of deducing everything *a priori* from a small number of premisses, led him to conceive all truth as an ordered chain of deduction in a sense which is essentially false. In Pure Mathematics, where alone this ideal is applicable, the task which he attempted has been at last accomplished; but elsewhere, premisses which are essentially empirical—*i.e.* concerned with existence at particular times—appear to be logically and ultimately essential.

The Encyclopædia required what Leibniz called *Scientia Generalis*, *i.e.* a general method applicable to all the sciences; this was, in fact, the whole of his Logic (p. 176). M. Couturat studies it fully in a long chapter (chap. vi.).

Leibniz makes two divisions in the art of reasoning. We may reason, he says, from principles to consequences, from causes to effects; or again, we may go from given consequences to the principles required, from known effects to unknown causes (p. 177). The other division is into the logic of certainties and the logic of probabilities (p. 239). Both these divisions seem objectionable. If a principle can be inferred from a consequence, it must follow from the consequence, and is therefore a consequence of the consequence. As for causes and effects, it is of course possible, speaking generally, to argue either from effects to causes or from causes to effects, and this seemed relevant to Leibniz because he regarded causes as *logically* prior to effects (p. 222). But when it is recognised that cause and effect are on the same logical level, this twofold direction of temporal implications ceases to have a fundamental logical importance. As for probability, it is, Leibniz says, the logic of the real; if we could calculate the

probability of all the events that are possible in a certain contingency, the one which is most probable would certainly happen (p. 239). This view seems to rest upon a false theory of probability, but I cannot discover precisely what theory, or whether any definite theory at all. It seems certain, however, that the most probable of a number of events is never certain unless all the others are impossible. The whole theory of probability appears to belong to a world apart, having nowhere any contact with the world of certainty; and this is fortunate, for the logical analysis of probability, so far as I have been able to discover, is as yet wholly unaccomplished.

Leaving this twofold division, let us examine the rest of Leibniz's general science. The analysis either of ideas or of truths, he says, may be infinite; but the foundation of all truths is the same, namely that the predicate is contained in the subject (pp. 184, 208 ff.). Consequently there are no indemonstrable axioms except the law of identity or contradiction, though for the present it is necessary to accept some axioms without proof. Axioms are proved *by means* of definitions, but their truth rests on the law of identity, not on definitions. Definitions are not arbitrary, as Hobbes maintained, for their objects must be shown to be *possible*, *i.e.*, not contradictory. The best way of proving this is to analyse a notion completely, for all simple notions are compatible *inter se*. Here Leibniz was faced by an insuperable difficulty, which was one great source of error in his philosophy. We saw that he believed all synthesis of simple concepts into complex ones to be of a single type, the type which is now called logical multiplication. Hence he was unable to explain how simple ideas, all compatible *inter se*, could generate incompatible complexes (p. 432). He remarks himself (*Gerh.* vii., 195): "It is yet unknown to men what is the reason of the incompossibility of different things, or how it is that different essences can be opposed to each other, seeing that all purely positive terms seem to be compatible". The fact is, that the notion "not-*a*" is formed by a synthesis of quite a different kind from logical multiplication: there is not a class of *nots* and a class of *a's* whose common part is "not-*a*". Thus incompatibility is only explicable by admitting a synthesis which is not that of two predicates, such as the analytic theory of judgment requires; and yet, until we have such negative predicates as "not-*a*," there is no possibility of contradiction, and therefore no field for the application of the analytic criterion of truth. And when this one new form of synthesis has been admitted, it becomes easy to see that there are others, of which the chief are logical addition and relative multiplication.[1] Thus a more careful consideration of negative terms and of the conditions of incompatibility would have sufficed to show Leibniz the falsity

[1] Relative multiplication is the kind of synthesis which, from two relations of father to son, obtains a relation of grandfather to grandson.

of the analytic theory of truth and of the whole subject-predicate logic.

That Leibniz held *all* truths, not only the necessary ones, to be analytic, is proved by many passages which M. Couturat quotes (see p. 208 ff.). This principle, that the predicate is always contained in the subject, is held to be the foundation of Leibniz's metaphysic (p. 209, note)—a thesis which is amply demonstrated in a separate article.[1] Every truth is either formally or virtually identical, and consequently has its *a priori* proof; but in the case of truths of fact, this proof requires an infinite analysis, which God alone can accomplish. Contingent truths, as Leibniz is fond of remarking, resemble incommensurables; the exact point of resemblance is that both involve an infinite series. The view that propositions which are analytic may not be necessary is strangly paradoxical, and brings out with startling clearness the hopeless inconsequence involved in Leibniz's doctrine of contingency, with its tiresome progeny of final causes, liberty, and optimism. Nevertheless the following passage, quoted by M. Couturat from an unpublished MS. (RMM, p. 11, note), leaves it beyond doubt that the above was really his view: "Ita arcanum aliquod a me evolutum puto, quod me diu perplexum habuit, non intelligentem, quomodo praedicatum subjecto inesse posset, nec tamen propositio fieret necessaria. Sed cognitio rerum geometricarum atque analysis infinitorum hanc mihi lucem accendere, ut intelligerem, etiam notiones in infinitum resolubiles esse."[2] The view which Leibniz held in youth, namely that the number of simple concepts is finite, and that there is only one kind of synthesis of concepts, involves the consequence that the total number of concepts is finite. For, owing to the law of tautology, nothing is gained by the repetition of a concept in a complex in which it already occurs; hence if n be the number of simple concepts, $2^n - 1$ will be the total number of concepts, both simple and complex. This consideration alone should have led Leibniz to reflect either that there is more than one kind of synthesis, or that the number of

[1] "Sur la métaphysique de Leibniz (avec un opuscule inédit)," *Revue de Métaphysique et de Morale*, January, 1902. I shall refer to this article in future as RMM.

[2] The view that infinite complexity is the defining property of the contingent has the curious consequence that truths about possible substances are contingent. For any substance that might have existed in a possible world (since all possible worlds involve time) would have had the same infinite complexity as actual substances have. I imagine Leibniz would have replied that individual substances—as opposed to generic and specific notions—are known to us only by experience, which requires actual existence; what *we* can know *a priori* never has infinite complexity, and hence we cannot have the notion of any one particular possible substance in a possible world, unless this substance actually exists. The infinite complexity required for particularising a substance exists confusedly in perception, but does not exist at all in our knowledge of possible non-existent substances.

simple concepts is infinite. One or other of these (both of which are true) is involved in the possibility of infinite complexity. I do not know whether Leibniz perceived this, nor, if he did, which of the two he adopted. It is certain that the doctrine of the infinite complexity of contingents belongs to his mature philosophy rather than to his earlier attempts; and M. Couturat's chapter on the Logical Calculus seems to show that his views on the kinds of synthesis did not change sufficiently to allow of infinite complexity resulting from a finite number of concepts. If, then, Leibniz perceived this difficulty at all, he must have abandoned the view —which seems to have been rather an unconscious prejudice than a definite opinion—that the number of simple concepts is finite.

The principle that all truths are analytic is Leibniz's "principle of reason". This principle is first stated in 1670, in the "Theoria Motus Abstracti"; it is not, M. Couturat says, a consequence of the law of contradiction, but its complement, for while the one affirms that every identical proposition is true, the other affirms that every true proposition is analytic, *i.e.*, virtually identical (pp. 214-215). The mutual independence of these two principles—which seems to be true in fact, and is suggested, though not explicitly stated, in Leibniz's language—has a very curious consequence, not pointed out by M. Couturat. If the principle of reason does not follow from the law of contradiction, it cannot, according to Leibniz's logic, be itself analytic, and is therefore an instance of its own falsity. This proves that, unless we can deduce from the law of contradiction itself that all truths are analytic, there must be at least one truth which is synthetic. The principle of reason, therefore, is either false or a mere consequence of the law of contradiction—an alternative which *we* can have no hesitation in deciding.[1]

Leibniz speaks sometimes as though the principle of reason were only applicable to contingents. This, M. Couturat rightly remarks, is due to the fact that elsewhere, though applicable, it is not required for demonstration (p. 216). Its universality results from Leibniz's dictum: "We may say, in some sort, that these two principles are contained in the definition of the true and the false" (p. 217). The contingency of all temporal existents results from the definition by infinite complexity through the principle that the cause is the ground of the effect, whence an infinite analysis is required for the *a priori* proof of temporal propositions (p. 222). The use of the principle of reason in deducing the nature of what actually exists is interesting, but very confused. M. Couturat proves from an unpublished MS. that already in December 1676 Leibniz held that not all possibles exist (p. 219, note)—a fact

[1] M. Couturat tells me that he regards as analytic every proposition which follows from the principles of logic, of which the law of contradiction is only one. I do not know whether he attributes this position, which solves the above difficulty as well as many others, to Leibniz.

which, as is justly observed (RMM, p. 12, note), suffices to prove that Spinoza had no durable influence upon him, at least as regards fundamentals. The question therefore arises why some things exist rather than others. The reply, to which, in published works, Leibniz always gave a theological turn, was that that world is actual in which there is the greatest metaphysical perfection, *i.e.*, in which the greatest quantity of essence exists. The conflict of possibles, he says, results in the greatest number of compossibles (*Gerh.*, vii., 194). This is the "divine mathematics" or "metaphysical mechanism" of which we hear so much (p. 227). Leibniz's optimism was logico-mathematical: perfection was merely a quantitative maximum.[1] But the question for us is: How does this view follow from the principle of reason? The answer to this question turns on the theory of existence. On this theory, he makes two classes of remarks, which both he and M. Couturat appear to regard as mutually consistent, but which seem to me radically opposed to each other. On the one hand, we are told that existence is a perfection, and that there is something more in the concept of what exists than in that of what does not exist, whence our author concludes (RMM, p. 13) that existence, like any other predicate, is contained in subjects of which it can be truly affirmed. But again Leibniz says: "If existence were anything other than the exigence of essence, it would follow that itself would have a certain essence, or would add something new to things, concerning which it might again be asked, whether this essence exists, and why this rather than another" (*Gerh.*, vii., 195, note). This passage sounds like a refutation of the others; nevertheless it is not so regarded by Leibniz, for he says: "Existentia a nobis concipitur tanquam res nihil habens cum Essentia commune, quod tamen fieri nequit, quia oportat plus inesse in conceptu Existentis quam non existentis, seu existentiam esse perfectionem; cum revera nihil aliud sit explicabile in existentia, quam perfectissimam seriem rerum ingredi" (RMM, p. 13, note). The end of this very instructive passage seems to imply that existence *means* belonging to the best possible world; thus Leibniz's optimism would reduce itself to saying that *actual* is an abbreviation which it is sometimes convenient to substitute for *best possible*. If these are the consolations of philosophy, it is no wonder that philosophers cannot endure the toothache patiently! The whole theory is so radically vitiated by the analytic theory of judgment that it seems impossible to state it at all clearly.[2] But the use of the principle of sufficient

[1] P. 231. M. Couturat adds: "or minimum"; but metaphysical perfection in itself is always a maximum, though in some mathematical problems—*e.g.*, the principle of least action—a minimum appears as an alternative.

[2] M. Couturat's work has led me to abandon the theory that Leibniz held existential propositions to be synthetic—with regret, since the theory he did hold appears to me very inferior to the one which I imputed to him in my *Philosophy of Leibniz*. It is clear, at any rate, that Leibniz

reason is quite plain from the discussion in *Gerh.*, vii., p. 194, where it is laid down that "the first truth of fact, from which all experiences can be proved *a priori*, is this, namely: *Everything possible demands that it should exist*". And this principle is proved by observing that, unless there were some inclination to exist involved in essence itself, nothing would exist, since no reason can be given why some essences should demand existence rather than others. Thus essences range themselves in the conflict on the side of those with which they are compossible, and a tug of war results, in which the majority are victorious. An interesting conflict of ghosts all hoping to become real! But it is hard to see what God has to do in that *galère*.

Sciences dealing with actual existents, as appears from the above theory, were for Leibniz just as *a priori* as other sciences. Immediate internal experiences are first truths for us, but not absolutely; experience is only confused reason (pp. 256, 259). Induction, as understood by empiricists, is absolutely condemned by Leibniz, as insufficient and even misleading (p. 261). Deduction is for him the only method, and abstract mathematics is the true logic of the natural sciences (p. 271). These views are not in harmony with those of most modern logicians, but I cannot help thinking, with M. Couturat (p. 271 note), that there is no valid inference which is not deduction, and that induction, in so far as it is not disguised deduction, is merely a method of making more or less plausible guesses. Where Leibniz erred was, not in insisting that deduction is the only method of inference, but in failing to realise that the number of independent premisses, obtainable only, if at all, by immediate inspection, instead of being two, is strictly infinite.

Chapter vii. deals with Universal Mathematics—a subject which appears to be precisely identical with what Mr. Whitehead has called Universal Algebra. Although M. Couturat deals with this subject in a different chapter from that devoted to the Logical Calculus, he does not clearly state, any more than Leibniz does,

regarded "truths of fact" as analytic in 1686, when his system was new and he had not yet forgotten his reasons for it. In later years, however, expressions occur which are difficult to reconcile with this view, such as: "Truths of fact are contingent and their opposite is possible" (1714; *Gerh.*, vi., 612); "A truth is necessary when the opposite implies contradiction; and when it is not necessary, it is called contingent" (1707; *Gerh.*, iii., 400); "when any one has chosen in one way, it would not imply a contradiction if he had chosen otherwise" (1711; *Gerh.*, ii., 423). Such passages can only be reconciled with M. Couturat's view by the distinction between explicitly and implicitly analytic propositions; where an infinite analysis, which only God can perform, is required to exhibit the contradiction, the opposite will *seem* to be not contradictory. The only other escape I can imagine, which appears to be that favoured by M. Couturat, would be to suggest that the denial of an analytic truth might be not self-contradictory; this mode of escape, however, would not, I think, commend itself to Leibniz.

the exact difference between the two. The fact is that the *Ars Combinatoria*, or Universal Mathematics, is more formal than the Logical Calculus: it is concerned with deductions from the assumption of a synthesis obeying such and such laws, but otherwise undefined. We may say that, in this subject, our signs of operation, our + and × and whatever other such signs we may employ, are themselves variables, subject merely to hypotheses as to their formal laws; whereas in every other branch of mathematics, and in the Logical Calculus itself, only the letters are variable, and the signs of operation have constant meanings. It might seem, from this account, as though Universal Mathematics were the most general of all mathematical subjects, and in a sense this is true. But it is emphatically not the logically first of such subjects, for itself employs deduction and the logical kinds of synthesis, which are explicitly dealt with in the Logical Calculus. Moreover, in order that any deductions from an assumed formal type of synthesis may have importance, it is necessary that there should be at least one synthesis of the type in question; and this can never be proved by the *Ars Combinatoria* itself. This science, therefore, is logically subsequent to the Logical Calculus. The matter may be stated thus: In every proposition, when fully stated, there must be constants, *i.e.* terms whose meaning is not in any degree indeterminate. When we turn our symbols of operation into variables, we do not thereby remove all constants from our propositions, for the formal laws to which our operations are to be subjected will require constants for their statement. I have succeeded in reducing the number of indefinable terms employed in pure mathematics (including geometry) to eight (a number which may be capable of further diminution), by means of which every notion occurring throughout the whole science can be defined. Thus all mathematics is merely the study of these eight notions; and the Logical Calculus is a name for the more elementary parts of this study. We have here precisely such a development as Leibniz desired to give to all subjects—with the difference, due to the fact that propositions are synthetic, that the indemonstrable axioms of mathematics, instead of being one, appear to number about twenty.[1] Thus Symbolic Logic is distinct from, and logically prior to, the subject which Leibniz calls Universal Mathematics. But the notion of different possible algorithms was very attractive to Leibniz, and the Logical Cal-

[1] The only ground, in Symbolic Logic, for regarding an axiom as indemonstrable is, in general, that it is undemonstrated; hence there is always hope of reducing the number. We cannot apply the method by which, for example, the axiom of parallels has been shown to be indemonstrable, of supposing our axiom false; for all our axioms are concerned with the principles of deduction, so that, if any one of them be true, the consequences which might seem to follow from denying it do not follow as a matter of fact. Thus from the hypothesis that a true principle of deduction is false, valid inference is impossible.

culus presented itself to him as that species of the Calculus of Combination which is subject to the law of tautology ($aa = a$) as well as to the commutative law. This and the geometrical calculus were the two that he endeavoured to develop out of the infinity of algorithms that appeared to him possible (pp. 320-321).

M. Couturat's researches into Leibniz's work on Symbolic Logic are exceedingly interesting: they show the great progress he had made, and the precise causes of his failure. He occupied himself with this subject principally at three periods, 1679, 1686, and 1690. The second of these dates is interesting, for M. Couturat has found a long MS. which completes the *Discours de Métaphysique* and shows its connection with Leibniz's logical studies. The editors, as our author remarks, are the more unpardonable in having omitted this MS., as Leibniz has written on it: "Hic egregie progressus sum" (pp. 344-345).

The system of 1679 represents simple concepts by primes, and conceives their combination on the analogy of arithmetical multiplication. At first, Leibniz thought one number would do for each concept; but he soon found that negative terms were required, and for these he employed negative numbers. Here, however, the rules of composition could no longer be made analogous to those of arithmetic. In order that a complex notion should be possible, it was necessary and sufficient that the positive and negative numbers representing it should have no common factor. He proves many theorems, notably one which he calls "præclarum theorema": If a is b and c is d, then ac is bd. He also arrives at the logical definition of cardinal numbers, recently revived by Frege and Schröder: thus he says that m is one when, if a is m and b is m, it follows that a and b are identical (p. 342). Once only he represented by multiplication what we call logical addition, and obtained the law of tautology for this case also; but he was unable to develop this idea, because he preferred the point of view of intension (p. 343).

In the system of 1686, Leibniz discovered the double interpretation of formulæ, according as single letters stand for concepts or propositions (p. 354). But he involved himself in hopeless difficulties owing to his determination to rescue scholastic logic at all costs. His calculus rightly refused to justify faulty conversions, or to give existential import to universal terms. He remarks: "All laughers are men, therefore some man laughs; but the first is true even if no man langhs, while the second is not true unless some man actually langhs" (p. 359). To avoid this difficulty, he says that all terms are to be tacitly assumed to exist (p. 360); nevertheless he has to admit the impossible, *i.e.*, that there are general terms which do not exist (p. 349). If he had had less respect for scholastic logic, M. Couturat concludes (p. 354), the Algebra of Logic would have been constituted some 200 years sooner.

The system of 1690 adds little to its predecessors. Leibniz

thought that the formulæ for intension and extension were the same, which is only true when addition is everywhere changed into multiplication and *vice versa* (p. 374). M. Couturat sums up his account by saying that Leibniz possessed almost all the principles of Boole and Schröder, and in some points was more advanced even than Boole; but he failed to constitute symbolic logic because it cannot be based upon the vague idea of intension (pp. 386-387). There is, no doubt, a certain broad truth in this statement: the Logical Calculus undoubtedly requires a point of view more akin to that of extension than to that of intension. But it would seem that the truth lies somewhere between the two, in a theory not yet developed. This results from the consideration of infinite classes. Take *e.g.* the proposition "Every prime is an integer". It is impossible to interpret such a proposition as stating the results of an enumeration, which would be the standpoint of pure extension. And yet it is essentially concerned with the terms that are primes, not, as the intensional view would have us believe, with the concept *prime*. There appears to be here a logical problem, as yet unsolved and almost unconsidered; and in any case, the matter is less simple than M. Couturat represents it as being.

Leibniz's Geometrical Calculus, which is discussed in chapter ix., is distinctly disappointing. He was not satisfied with analytic geometry, for it is not autonomous, but requires synthetic proofs of its foundations (p. 400). Not Algebra, he says, but a "more sublime analysis" is the true Characteristic of Geometry (p. 388). What he should have invented was Grassmann's Calculus of Extension; he had at one time the idea of projective Geometry, *i.e.*, of a Geometry using only straight lines, and for this he wanted a "linear analysis" (p. 404, note, and p. 409). He held the view —which, in spite of Kant, is now known to be correct—that Geometry does not depend upon figures for its proofs, but on intelligible relations (p. 401). He made endeavours to analyse these relations: position, he says, distinguishes objects having no intrinsic distinction, but this applies equally to magnitudes, and he failed to make a philosophic analysis of position (pp. 407-408). The fact is that the above is a mark of all asymmetrical relations whose terms are simple; but this fact was a contradiction for Leibniz, as for most modern philosophers, owing to the subject-predicate theory of propositions.

Leibniz at first endeavoured, in his geometrical calculus, to deal with the two relations of similarity and congruence; but later, he dealt with congruence only (pp. 411, 417). From congruence alone he obtained definitions of the straight line and plane; but he was unable to deduce that there are straight lines, or that they are determined by any two of their points (p. 420). He justly remarks: "Imagination, taken from the experience of the senses, does not permit us to imagine more than one intersection of two straight lines; but it is not on this that the science should be

founded" (p. 422). He took distance to be independent of the straight line and anterior to it (p. 417); but he was unable to deduce the fundamental properties of the straight line. He failed to make a Geometrical Calculus, and merely introduced a new and less convenient system of co-ordinates, the system of bipolars or tripolars; and his failure was due to his remaining metrical.

This metrical bias is attributed by M. Couturat (pp. 438-439) to respect for the "narrow, poor and stunted principles of Euclid's Geometry". Doubtless respect for Euclid was one cause of failure; but it appears to me highly probable that the relational theory of space was a more potent cause. When I formerly held this theory, I made almost exactly the same attempts to base Geometry on distance; and if the relational theory were true, such a basis would be alone correct. The straight line, it is true, is generated by a relation, but this relation holds, for a given straight line, between only *some* points and some others, whereas a given relation of distance holds between *every* point and some others. Thus the generating relation of a straight line picks out some points of space as inherently peculiar, so that the straight line, if taken as fundamental, is fatal to thorough-going relativity. Nevertheless, geometry imperatively requires that the straight line should be made fundamental, though distance can be introduced with advantage as a late and derivative notion. A mere mathematician might have been unaffected by this consequence of the relational theory, but not so a philosopher such as Leibniz; and in the discussions with Clarke, the necessarily fundamental nature of distance, in any such theory, often very plainly appears (*e.g.*, *Gerh.*, vii., 400, 404).

In a short conclusion, M. Couturat sums up his results, and ends with an impressive warning against too great respect for authority. Leibniz, he says, was not the autodidact that he boasted himself to be, and erudition interfered with his originality. "We shall never know the price that the human mind has had to pay for over-perfect works such as the *Organon* of Aristotle and the *Elements of Euclid*, nor by how many centuries they have retarded the progress of the sciences by discouraging innovators" (p. 440). An admirable remark for readers! As for authors, the danger of producing over-perfect works is one which is by no means pressing, and need scarcely disturb their equanimity.

The work ends with five appendices and a number of notes, in which much useful information will be found. In the article on Leibniz's metaphysic already referred to, which should be read in connexion with the book, the main outlines of his doctrine of monads are deduced, in his own words, from his logical principles It is also shown that his Dynamics had very little influence on his philosophy, though his philosophy had much influence on his Dynamics (p. 21 ff.). This is established beyond question by a MS. of 1676, in which most of his metaphysical theories are already to be found, in combination with a belief in atoms (p. 24). The general conclusion, that Leibniz's logic was the true founda-

tion of his whole system, seems thus to be once for all demonstrated.

It has been necessary, in the above account, to review Leibniz as well as M. Couturat, for it may almost be said that the work constitutes a new book by Leibniz.[1] For those who have not read this book, it will be impossible henceforth to speak with authority on any part of Leibniz's philosophy.

Dr. Cassirer, like M. Couturat, regards Leibniz's Logic and his investigations of the principles of mathematics as the source of his metaphysical system. Nevertheless his book differs very widely from M. Couturat's in its theory as to Leibniz's opinions and as to the logical and historical order of the various parts of his philosophy. Unlike M. Couturat, the present author has not yet grasped the very modern discovery of the importance of Symbolic Logic. In the philosophy of mathematics, his views appear to agree closely with those of Prof. Hermann Cohen,[2] to whom the book is dedicated, and to whom acknowledgments are made in the Preface. We find, accordingly, in spite of occasional references to Dedekind and Cantor, but little realisation of even the arithmetising of mathematics, and none at all of the still more recent "logicising," if such a word be permissible. Mathematics, for Dr. Cassirer, is not synonymous with Symbolic Logic, and Logic is synonymous with theory of knowledge. In both these respects, the work is Kantian, and supposes Leibniz, at least in a measure, to be also Kantian. The very rare merit of not imputing one's own philosophy to the author one is discussing belongs to M. Couturat's work, but not, I think, to Dr. Cassirer's; and as mathematics have of late conclusively disproved the Kantian doctrines as to their principles, the result is to rob Leibniz of his most extraordinary merit—I mean, the realisation of the supreme importance of Symbolic Logic.

The work, we are told in the Preface, arose out of questions as to the foundations of mathematics and mechanics. The mathematical motive was paramount in the formation of Leibniz's system, which is not to be judged by the rigid dogmatism of the *Monadology*. Kant's results—*e.g.* as regards the ideality of space and time—were largely anticipated by Leibniz: the originality of the Critical Philosophy lay rather in the form and method than in the results. Leibniz—so the difference is stated in a later passage (p. 264)—says that the methods of knowledge, *though* ideal, are valid for the real: Kant's originality lay in turning *though* into *because* in this statement.

[1] M. Couturat is publishing a large collection of unpublished Leibniz MSS., which will appear shortly.

[2] *Cf.* especially *Das Princip der Infinitesimal-methode und seine Geschichte*, Berlin, 1883. This work, though admirable in its historical parts, is now antiquated in its constructive theories.

After a long Introduction on Descartes' critique of mathematical and scientific knowledge, the body of the work is divided into four parts, dealing respectively with Mathematics, Mechanics, Metaphysics, and the growth of Leibniz's system. All knowledge, the Introduction asserts, is for Descartes really mathematics, and magnitude is the fundamental concept of mathematics. Moreover, magnitude is essentially connected with space, and is by Descartes almost identified with extension. By attempting to reduce everything to space, he failed to give due weight to time, and so failed to found Dynamics: his notion of force is only valid for Statics. In his notion of substance he failed to hold fast its deepest meaning, which is (p. 60) "to postulate as a condition of the object the thorough-going unity of knowledge".

In Part I. the first chapter deals with the relation of mathematics and logic. Leibniz assigned to Aristotle the merit of having first written mathematically outside mathematics. All certain knowledge, Leibniz says, incorporates logical forms (of which, however, some are not Aristotelian). Dr. Cassirer, in a true Kantian spirit, remarks that this view is problematical, if Algebra and Geometry contain an independent contribution to method: to reduce mathematics to logic is to loosen its connexion with the sciences of experience andnature (pp. 107-108). To this we must reply that it is now *known*, with all the certainty of the multiplication-table, that Leibniz is in the right and Kant in the wrong on this point: Algebra and Geometry do *not* contain an independent contribution to method; and as for the connexion of mathematics with the sciences of experience, this is precisely the same as that of logic with the said sciences, *i.e.*, they cannot violate mathematics, which is concerned wholly and solely with logical implications, but also they all of them, including the geometry of actual space, require premisses which mathematics cannot supply. This conclusion, originally suggested by non-Euclidean geometry, has now, by the labours of Weierstrass, Cantor and Peano, been wholly removed from the region of dubitable hypothesis.

The author proceeds to discuss the relative importance of definitions and identical principles in Leibniz's proofs of axioms. He decides (p. 109) that the true principles are definitions, while the identical propositions are mere auxiliaries. I do not know whether this view is more tenable than the opposite: Leibniz's opinions could not be clear, as either alternative was absurd, for an identical proposition, if there were any such thing, would be perfectly trivial, while a definition is merely a statement of a symbolic abbreviation, giving information as to symbols, not as to what is symbolised. But here Leibniz's doctrine as to the possibility of ideas becomes relevant—his theory that all (complex) ideas involve a judgment. Dr. Cassirer speaks as though, in this notion, there were for Leibniz no difficulties: the mutual compatibility of all simple ideas is not mentioned. This is an instance (of which others might be given) of failure to apprehend the reasons why Leibniz's system cannot

be accepted as final truth. A concept, Dr. Cassirer says, is not for Leibniz merely a sum of given marks, but the result of a judgment (p. 117). Yet M. Couturat's account of the attempts to construct a Symbolic Logic shows that the opposite statement is at least equally correct, and that there is in fact a contradiction at this point. Possibility Leibniz says, may be proved by experience of actuality as well as *a priori*. This, the author remarks, shows that the decision of possibility goes beyond ordinary logic, and presupposes the foundations of scientific knowledge (pp. 112-113). The consequence, I think, is scarcely Leibnizian; for where there is no *a priori* proof of possibility, this is because a complete analysis has not been effected, so that we do not know *what* it is whose possibility is proved by experience. Logic, the author continues, is to be transformed from a science of the forms of thought into one of objects; this is to be effected by mathematics, which mediates between ideal logical principles and the reality of nature (p. 123).

Chapter ii., on the fundamental concepts of quantity, points out that Leibniz, like Descartes, starts from quantity, but in the form of number, not of extension: the effect of having started from discreteness is visible throughout his work. He was guided, says the author, by the notion of the identity of logic and mathematics, where logic, to begin with, must be the logic of quantity. But Algebra is not the general logical method, and the science of quantity leads to that of quality. The next chapter, on the geometrical problem of space, asserts that the further development of the notion of quantity is to be derived from the Infinitesimal Calculus, whose presuppositions are not arithmetical merely, but spatial. As a statement of Leibniz's view, this is probably correct; as a statement of the facts, it has been disproved by Weierstrass and the arithmetical theory of irrationals. The essence of space, Leibniz points out—and this is an important truth—is not magnitude, for magnitude belongs also to number, time, and motion, and does not belong to the point, which is yet spatial. Leibniz's x in his Characteristic, Dr. Cassirer says, is not a true variable, but a collection: it is not obtained, as in the true notion of the variable, by varying one identical element (p. 155). This remark is not easy to understand, but if it means, as it seems to do, that a variable varies, or has some dependence upon time and change, it is certainly mistaken. The nature of the variable is the fundamental problem of mathematical philosophy, and I do not know any satisfactory theory on the subject. But it is quite certain that the variable is a purely logical notion, introducing only such concepts as *class*, *any*, *some*, and logical implication; to make it depend upon time is to make the mathematical treatment of time itself logically impossible, and to misunderstand the abstractness of Symbolic Logic, in which, though time is absent, the variable is present throughout. The nature of the variable, in fact, is more akin to that of logical disjunction than to any notion involving variation or change.

Chapter iv. deals with the problems of continuity, infinity and the infinitesimal. The exposition is historically careful, and appears to take note of all important passages; but the author's own views are, on these subjects, apparently more in agreement with Leibniz's than modern mathematics will permit. He writes, however, in this chapter, with a certain reserve (*e.g.* p. 218), which makes it difficult to feel certain as to his opinions, or even whether they are definite.

The differential, we are told, is constituted by the qualitative unity of a law, while the integral denotes a magnitude as generated by a law (p. 170). Zero as a limit has positive significance: dx, though quantitatively zero, retains the character of what vanishes, and is intelligible, not as a single quantum, but only in the process. Leibniz showed the impossibility of regarding the continuum as a single datum: only by a law of becoming can it be understood. Thus continuity requires change, but change thereby becomes the necessary presupposition of the concept of reality (p. 185). A simple substance, for Leibniz, is the law of a series, whose terms are the states of a substance (pp .187-188): or again, it is the general term of the series (p. 538). The constancy presupposed in the conception of being is no longer the unchangeability of a thing, but the methodical constancy of the rule according to which the content varies (p. 189). In these views, which are supported by texts from Leibniz, we must, when we inquire into their truth, distinguish two elements, the mathematical and the philosophical. Leibniz's belief that the Calculus had philosophical importance is now known to be erroneous: there are no infinitesimals in it, and dx and dy are not numerator and denominator of a fraction. The doctrine of limits, by careful statement, has been found alone adequate, and has shown that the Calculus is an advanced and purely technical development of the science of order. The continuum is essentially a single datum, in the sense that it is the field of a given relation; but the essential properties of continuity belong primarily to the relation, and belong to the terms composing its field not *quâ* class of terms, but only *quâ* field of a continuous relation. Continuous relations, so far from depending upon time or change, are not known even to occur in temporal series: the only indubitable instances of such relations are derived from Arithmetic. So far for what mathematics has to say. As regards philosophical questions, I confess that I fail wholly to understand what is meant when it is said that reality presupposes change, or that the constancy presupposed in Being is not unchangeability, but the constancy of a rule of variation. Change of what? from what? into what? one must ask; and these questions can only be answered by means of logical concepts, whose Being is free from dependence upon time, and is thus necessarily unchangeable. Change in an identical content means difference in its relations to different moments of time; but the content must remain strictly self-identical, and this self-identity

is logically prior to change, not subsequent to it. Again, neither Leibniz nor Dr. Cassirer have realised what is meant by the constancy of a rule, the law of a series, etc. These notions mean that the terms whose law is constant are the field of a serial relation: there is nothing constant, so the position may be stated, except the serial relation itself. But the constancy of this relation is precisely the absolute timeless self-identity which was to have been banished; and this will still have to belong to terms as well as to relations, if different relations are to have different fields in any significant sense.

The same desire to make conceptions fluid appears in Leibniz's definition of equality as infinitesimal inequality. Following Cohen (*op. cit.*), Dr. Cassirer approves this definition, and adds that, in modern language (*i.e.* Cantor's), two magnitudes are equal when they are defined by equivalent fundamental series, *i.e. by such as have between corresponding terms differences whose limit is zero* (p. 194). The gloss in italics introduces a quantitative notion wholly foreign to the essence of limits. Equality, to begin with—although, where irrationals are concerned, Cantor's language is ambiguous—is never *defined* by fundamental series, but by absolute identity. And fundamental series may be equivalent, *i.e.* may have the same limit (if any), or define the same segment in any case, although the difference of corresponding terms is constant and infinite.[1] Thus when Dr. Cassirer remarks (p. 197) that the very notion of exactitude is now altered, we must reply: Yes, into inexactitude.

Infinity, the author points out, is for Leibniz that of a distributive, not of a collective, whole: it is not a property of a single datum, but essentially of an infinite process. It is the continuation of a law as against every single term created by the law (p. 200 ff.). This seems to mean that there are relations whose fields cannot in any way be treated as units, and which are such that no finite number of terms constitutes the whole of the field. The difficulty of the view lies in the fact that to be the field of a given relation is in itself a kind of unity, and seems to imply necessarily the existence of a collective whole. But to pursue this subject would take us into the darkest corners of logic. Infinitesimals, it is pointed out (p. 207), are stated by Leibniz to be merely useful fictions. On this point, there is the greatest difficulty in discovering his true opinion, for he certainly used notions derived from the Calculus in establishing force, and in many ways the infinitesimal seems to be involved in his philosophy. But Dr. Cassirer appears to be unconscious, or nearly so, of the magnitude of this inconsistency

[1] For example, if ω represent the ordinal number of the finite integers in order of magnitude, the series whose general terms are respectively $\omega \times 2n$ and $w\,(2n+1)$ both have ω^2 for their limit, although the difference of corresponding terms is always ω.

The Law of Continuity is also discussed in chapter iv. The single concept, we are told, in order to be understood in its origin, must no longer be regarded as a rigid and immovable logical entity: its being is only determined in connexion with a logical system, and the system of concepts must assimilate the notion of logical development. The postulate of continuity is not intelligible if a given material is to be described, but only because it is one of the fundamental acts by which consciousness conditions the object. In more special forms, the law of continuity asserts that extreme cases, from some points of view excluded, may yet be included in general theorems, *e.g.*, propositions concerning the ellipse will hold for the parabola. The general statement is: Datis ordinatis etiam quæsita sunt ordinata. M. Couturat points out (p. 233), what Dr. Cassirer appears not to have observed, that this principle is regarded by Leibniz as a consequence of the principle of reason; the deduction, however, unlike most of the others, is invalid.[1] Moreover the principle is false in fact, unless it means, what would be perfectly trivial, that the consequents are ordered by the mere correlation with the data. Take, for example, the series of rational fractions in order of magnitude, each in its lowest terms. The numerators of these fractions are one-valued functions of the fractions, but have no order except that resulting from the correlation itself. Again, in the case of the ellipse and the parabola, the latter has some but not all of the properties of the former, and the mathematician's desire to treat such different cases together, though praised by Dr. Cassirer (p. 221), has been a source of constant and most pernicious fallacies. The principle of continuity, therefore, must be regarded as one of the most unfortunate parts of Leibniz's philosophy. Mathematically, it is false; and the philosophical meaning suggested by our author seems to amount to the assertion that everything is really something else—a principle whose merit is, that it excuses us from the necessity of understanding anything because it isn't really the thing we don't understand.

Part ii., on Mechanics, opens with a chapter on Space and Time. Time, it says, is the independent variable in regard to all related magnitudes (p. 257). This assertion is often made, without, I believe, any knowledge of its exact meaning. The only exact meaning of which it is capable is, that any relation relating all the moments of time respectively to various magnitudes of a given kind may be many-one, but cannot be one-one or one-many.[2] This is of course more or less true of important relations; but if there is any material particle which is never twice in the same position in space, then, as far as that particle is concerned, the

[1] In this M. Couturat informs me that he agrees with me.

[2] A relation is many-one when a given term has the relation to at most one other, one-many when its converse is many-one, one-one when it is both many-one and one-many.

principle is false, and the positions of the said particle might be taken as independent variable instead of the moments of time. Leibniz's doctrine of space and time is said—and I think rightly—to be astonishingly like Kant's: space and time are not real, nor relations of self-subsistent reals, nor abstract conceptions in the sense of being derived from sense-data; they are creations of the mind, belonging to the system of pure principles of knowledge, by which the possibility of objects as phenomena is secured (p. 263).[1] Space and time are orders of phenomena, not of substances; their ideality was first inferred from the difficulties of the continuum. When monads are said to have position, this is only to be understood figuratively: the spatial order of phenomena is not the image of a non-spatial order of substances; we might regard the monad as the expression of spatial order, but not spatial order as reflecting the order of monads. Time and space, as against Descartes, are co-ordinated by Leibniz. There is nothing constant in things but the law of the series, and the time order, as with Kant, is deduced from causality, not *vice versâ*.

The next chapter (chap. vii.), on the conception of force, utilises the doctrines as to the differential which one would have supposed the rejection of the infinitesimal would have rendered unavailable. The first postulate, it says, by which the real is defined, is determinateness of content in the moment; but this content has being only as a term in the series, not in isolation. Thus the momentary content must be conceptually fixed by a law involving past and future. This is effected by *force*, which, we are assured, is for Leibniz synonymous with reality (p. 288). Force is a special form of differential: it is what is real in motion, *i.e.*, the present state as pre-involving the future. The new mathematical method, we are told—and Leibniz does seem to have held this view—enables us to retain the Eleatic postulates as to the rational conditions of being, without excluding plurality and change (p. 292). This claim can be made, we must reply, not by the Calculus, but by the principles of Weierstrass and Cantor: indeed Weierstrass may be regarded as the modern Zeno, since he, first of moderns, accepted the principle of Zeno's argument, rejected by Dr. Cassirer, that every value of a variable is a constant. (This is the abstract form of the assertion that the arrow in its flight is always at rest.)

The principle of conservation is next discussed. Previous and subsequent events are always connected by an equation, "cause = effect". The possibility of satisfying the equation itself decides what events are causally related: the cause is an event, just as the effect is. The principle of conservation is not got from experience, but is a postulate. Dr. Cassirer appears not to perceive

[1] In my opinion, Leibniz had also another theory inconsistent with this one, and *if* monads mirror the universe, there must be real relations corresponding to the spatial relations of phenomena; but this is a point to which I shall return later.

that it involves an assertion as to the connexion of past and future which may or may not be true, and which elsewhere Leibniz explicitly denies. All equations are logical equations, *i.e.*, they state mutual implications; hence if any phenomena can be found to satisfy the equation "cause = effect," there must be events at different times so related that *each* implies the other. Hence the effect is on the same logical level as the cause, and the past has no logical priority over the future. Leibniz holds, however, that the past is prior in nature to the future (*e.g. Gerh.*, iii., 582); and M Couturat has shown that this opinion is a vital part of his system (Couturat, p. 222). But Leibniz had not a sufficient knowledge as to the nature of logical priority, or as to the connexion of Symbolic Logic with Mathematics, to have understood the inconsistency into which he was led on this point. Dr. Cassirer holds (p. 331) that it was for the sake of the principle of conservation that Leibniz denied the interaction of soul and body. In view of the texts in the letters to Arnauld and in M. Couturat's work, this view appears to me no longer tenable: the logical argument is short, clear, and on its own premisses valid. I see therefore no reason to require any other ground for Leibniz's opinion.

Part iii., on Leibniz's Metaphysics, endeavours to show that his views were practically those of Kant, and that they were derived largely from his scientific studies, especially from Dynamics. Both these opinions appear to me to be erroneous. In rejecting the latter, I agree wholly with M. Couturat;[1] and as he has new documentary evidence, his position may, I think, be regarded as established. The question as to the interpretation of Leibniz's metaphysics is more difficult. Dr. Cassirer regards the passages in the letters to Arnauld as treating the relation of the Ego to its states as *analogous* to that of subject and predicate (p. 358). For my part, I cannot discover any justification for seeing a mere analogy where absolute identity appears to be plainly asserted. The positing of identity, says our author, is only understood by reduction to the conception of the Ego (p. 360). The passage in *Gerh.*, ii., p. 43, appears to me to show quite conclusively that the reduction is the other way. I confess that a subjective view of identity is to me unintelligible. Identity, Dr. Cassirer says (p. 131), is not found by thought, but created in the progress of knowledge. This means that there is no identity until we think so. Nature presents me with Jones, and I, wishing to see my old friend Smith, postulate that it is Smith; and thereupon, as by magic, the thing is done. But what it was I wished, seeing that before my wish the identical Smith had no kind of being, it seems totally impossible to conceive. The whole view, in short, confounds the process of learning with the facts learned, and is unable to conceive propositions except as mental existents. And it seems a sufficient

[1] See the end of the review of M. Couturat, *supra*.

refutation, in the case of identity, to point out that, on the theory in question, the assertion that the Ego persists is purely linguistic, and has no significance except as part of a dictionary.

In a similar subjective spirit, our author discusses the question of perception. The object is a well-founded phenomenon, not because it reflects a transcendent world of absolute existents, but because it represents an order which satisfies the scientific reason (p. 364). In other words, the scientific reason is satisfied by a tissue of falsehoods. The world of bodies is only a content of thought; there is no *ground* for the existence of phenomena. It is a mistake to suppose that Leibniz constructed bodies out of monads. The organic body is not a new element in the monad, but a determination of the content of consciousness (p. 408). To say that monads mirror the universe is only a figurative expression: there is no absolute object, such as would be required for mirroring. It might seem to have been forgotten that there are many monads; but Dr. Cassirer adds (p. 468) that the perceptions of a single substance are not of the system of absolute substances. Since this system alone is real, it follows, one must suppose, that all perceptions are wholly mistaken: for what they perceive is unreal, and what is real they do not perceive. Our objects, we are told, are entirely spatio-temporal phenomena, and monads are not objects of either clear or confused perception (p. 468).

I am far from denying that many passages in Leibniz support this interpretation; but they belong, I think, almost all, to later years, when he had forgotten that his system needed grounds. Before examining the view, I should like to remove an objection, urged by Lotze and endorsed by the author (p. 467), against the view that monads mirror the universe. One thing *expresses* another, according to Leibniz, when there is a one-one relation of the parts of the one to those of the other, as *e.g.* in geometrical projection (*e.g. Gerh.*, ii., 112; vii., 264). Now such a relation is possible both between every pair of monads and between every monad and the whole system of monads. To take an illustration from Arithmetic: consider the various series whose general terms are respectively $1 - 1/n$, $2 - 1/n$, $3 - 1/n$, etc., where n is to take successively all positive integral values. Each of these series is similar both to every other series and to the whole series of series. If every term of each series stood for a state of a monad, and each whole series for a whole monad, we should get here a perfectly Leibnizian world, in which monads would all mirror both each other and the universe. Thus Lotze's objection, to which Dr. Cassirer answers by abandoning the notion of mirroring the universe, appears to be based upon an error.

In order to judge of the philosophy attributed to Leibniz by our author, let us endeavour to state it in precise and un-Kantian terms. Every monad is a causal series, the series being definable by the relation of causality (which must be taken as ultimate) and any one of the terms of the series. All the series are ordinally

similar, and corresponding terms are called simultaneous. (This is in fact the meaning of simultaneity.) Not only do the various series correspond term for term, but also all the parts of corresponding terms (each term being infinitely complex) correspond in the way required for interpreting the dictum that each monad mirrors the universe. Each term is what is called a momentary state of the monad; the monad itself is the generating relation of the series.[1] Each state of a monad is composed of perception and appetition. The latter is an embodiment, in a confused manner suggested by the Calculus and the subject-predicate logic, of the generating relation of the series. The former is a belief in the existence of what are called phenomena—the world of matter in time and space—which however do not exist. Such in outline is the philosophy attributed to Leibniz. Except as regards appetition, there is, I think, no logical contradiction in this system. There is, however, an empirical fact—which, unluckily for themselves, the supporters of the system cannot deny—which is logically inconsistent with it; and that is the fact that parts, at least, of the system have been believed. For the subjective theory of phenomena leads, with the doctrine of the correspondence of monads, to the conclusion that whatever has been or will be believed is false; and a philosophy leading to this conclusion can only be true if no one advocates it. The conclusion will, of course, be denied by supporters of the theory; but the consequence follows inevitably from the doctrine that "only indivisible substances and their various states are absolutely real" (*Gerh.*, ii., 119), together with Dr. Cassirer's opinion that monads are not objects of either clear or confused perception. For it cannot be maintained that there is another sort of knowledge besides perception, unless at most in regard to God and the eternal truths. To distinguish other knowledge of what exists from perception, it would be necessary to define perception as causally related to its object—a course which is inadmissible in a Leibnizian system.

But innumerable grounds concur in making it improbable that the above were Leibniz's opinions. In the first place, the attempt to infer Monadism from Dynamics, which Dr. Cassirer attributes to Leibniz, would surely be absurd, if the phenomena with which Dynamics deals are not appearances *of* monads, but are a mere phantasmagoria in each monad. Solipsism is the legitimate outcome of such a theory. The plurality of monads must have either been deduced from phenomena, or assumed quite arbitrarily.

[1] Dr. Cassirer sometimes speaks of the monad, as Leibniz himself does, as the law of the series; sometimes (p. 538) as the general term of the series. But neither of these notions has the necessary precision: a law is merely a confused way of describing a relation, and as for the general term of a series, there is properly no such entity. When the general term is expressed mathematically as a function of a variable number, the expression indicates that the series is defined by a certain relation correlating its terms respectively with the various numbers.

Again, the organic body, which Dr. Cassirer treats as part of the monad, is said by Leibniz to be composed of subordinate monads (*e.g. Gerh.*, vi., 598); and it is constantly affirmed that monads are dispersed throughout matter (*e.g. Gerh.*, ii., 135, 295, 301; vi., 608; vii., 330). In fact, as soon as matter is regarded as *merely* phenomenal, and not a confused perception of actual monads, all the scientific grounds for Leibniz's views, which are so dear to our author, vanish into thin air. The only remaining ground for plurality of monads would be metaphysical perfection—a principle of which the work before us takes very little account, since it is abstract and purely logical. In fact, the philosophy attributed by Dr. Cassirer to Leibniz is a fairy-tale quite as fantastic and arbitrary as the *Monadology* used to seem to be, whereas the system set forth by M. Couturat consists of deductions, drawn in Leibniz's own words, and almost all of them valid, from logical principles which in his day were universally admitted.

After a discussion of the origin of Leibniz's philosophy, there is a critical appendix in which the author's views are defended against M. Couturat and myself. It is urged (p. 537) that Leibniz's theory of phenomena presupposes a system of fundamental relations not reducible to predications. The reply is, that it is just because of this irreducibility that the said phenomena are regarded by Leibniz as phenomena and not as noumena.

The work is thorough and careful in its use of the sources, though there is, to my mind, a somewhat undue amount of interpretation and a somewhat excessive readiness to regard as figurative expressions which another theory could accept literally. The criticisms which have been made in the above review are almost all of them criticisms of the Kantian philosophy itself, and those who accept that philosophy will find in Dr. Cassirer's book exactly what they desire.

III.—HEDONISM AMONG IDEALISTS (I.).

By Bernard Bosanquet.

It is interesting to observe that Hedonism appears to be making way among Idealists. There are reasons for this, in the modifications which criticism has brought to the views of both the extreme parties to the anti-Hedonist controversy. Psychological Hedonism, more especially, seems to be dead, and its disappearance has brought the disputants nearer together. A certain air of *odium theologicum* has faded from the argument. It is probable that the influence of Sidgwick's views, co-operating with the deeper analysis of recent psychology, has had much to do with bringing about the present position.

Even those who, like myself, are still definitely anti-Hedonistic, must welcome this state of things. It affords some hope that we may attain, as R. L. Nettleship desired,[1] to a genuine appreciation and comparison of the experiences to which we give the name of pleasure, and may learn exactly where the difficulty lies which causes their nature and value to be so divergently estimated.

I have been greatly interested both by Mr. Taylor's and by Mr. Rashdall's treatment of the subject. But on the present occasion I wish to consider Mr. McTaggart's chapter "On the Supreme Good and the Moral Criterion" in his brilliant book of last year, *Studies in Hegelian Cosmology*. This, however its main thesis may stand the criticism of years to come, is for the present a leading document of modern Idealism. Now in such a work, a quarter of a century ago, we should as soon have expected to find a defence of materialism as an advocacy of Hedonism. Mr. McTaggart's view has therefore for those who learnt, say, from Green, the interest of a paradox, while, as I have indicated, it unquestionably belongs to a tendency of the Idealism of to-day.

[1] *Remains*, 1, 7.

I should feel very uneasy in differing from the argument of the chapter in question if I believed that by doing so I finally severed myself from the author's position as a whole. But this does not seem to be a necessary consequence. The author's idea of the Hedonic criterion does not depend so much on his doctrine of the nature of reality and the supreme good, as on his view of the means by which approximations to either can be ascertained. And a difference of opinion here, would not, I think, be fatal to agreement there.

My object in this paper is twofold: (1) To argue that the use or pleasure as a criterion, advocated by the author, necessarily passes into another criterion of a different kind; and (2) to explain and defend this other criterion in a way which I believe would harmonise with Green's ideas, but which I do not profess to find definitely stated in his works.

(1) I need not explain to the reader of MIND Mr. McTaggart's theory of Reality. It is enough to say that in this reality, not because it is real, but because it includes the perfection of the nature of individual selves, Mr. McTaggart is prepared to find the Supreme Good. For him, therefore, the Supreme Good contains pleasure, for it contains the satisfaction of conscious beings; but it is not purely and merely Hedonistic.

But, the author contends, the Supreme Good may be one thing, and the criterion of morality may be another. And the criterion, he urges, must be Hedonic so far as a criterion can be operative at all. His chapter aims at establishing this point.

That there must be a criterion of morality, as the following section (100) argues, may be admitted. Moral judgments claim to be objective, and therefore imply a standard by which, at least in theory, their claims are capable of being tested.

But in the conception of the criterion as indicated in the sections 100-102, preliminary to the main argument, we must note certain points.

i. The criterion, it is said, may be other than the Supreme Good itself. The Supreme Good, indeed, we shall find it argued, is so abstract in our knowledge, and in its abstract completeness so remote from our world of matter and of choice, that it cannot form a practical criterion to be applied by comparison with our actions. But (*a*) an extraneous criterion is of very doubtful value, and in fact may almost be said to constitute a danger, in all complex affairs of conduct and science. It is all very well where an arbitrary sign is annexed by convention to ready-made

alternatives; but a criterion other than the essence is just a concomitant circumstance; and to attend to concomitant circumstances instead of the essence, where the alternatives have to be constructed out of a continuous mass of experience, is a pretty sure road to fallacy. Ideas become fruitful, say in law or politics or science, just in proportion to the precision with which essentials as opposed to concomitants are retained before the mind.[1] Moral action is a very strong case of this principle. It is a very serious matter, indeed, for the mind to be pre-occupied throughout its practical deliberations with ideas which are not of the essence of what it really aims to achieve. It seems likely that such considerations must obtain a weight in the moral disposition to which their nature gives them no real claim.

(*b*) We should note the admission that to some extent we can see what conduct embodies the Supreme Good least imperfectly (sect. 102). In the later argument (sect. 105) this is, I think, hardly admitted to the same extent. And it might be asked in general how we can judge the fitness of our criterion if the lower degrees of perfection which it is to indicate are in themselves unknowable. But I suppose the answer would be that we presume its appropriateness on abstract grounds (sect. 125).

ii. It is important to bear in mind that any criterion must be individual in application, though the ultimate principle which it involves may be capable of being stated in the abstract. Thus when it is said, "Every moral judgment claims to be objective and demands assent from all men"—"if A asserts that to be right which B asserts to be wrong, one of them must be in error," these are merely the ideal logical postulates which apply to all science or rational judgment as such. They do not mean, and must not be taken to imply, either that right and wrong, in any one's conduct, can, in fact, be readily judged by outsiders, or that right and wrong can be in detail the same for A and B, as long as A is a different person from B or in a different position. The application of a criterion to actual moral conduct must always be of the same nature as the application of scientific principles to the solution of a highly individualised problem. Such a solution is "universal," because it brings to bear the spirit and content of a highly organised system upon a single point; but it is not "general" in the current sense of the word. The criterion, therefore, as applied, must be a concrete system, according

[1] Green, *Prolegomena*, sect. 308.

to which solutions are framed to satisfy complex individual groups of conditions.[1] This the author presupposes in explaining his Hedonic criterion; but appears to me to forget, in discussing the criterion of perfection.

iii. That which can be measured by the criterion can only, it is urged, be likeness to the supreme good and not tendency to hasten or to hinder its advent. The view of section 135, that nothing we can do can hinder (or, I suppose, hasten), the advance of the supreme good, seems to me to supersede this argument, and to be truer. But the interest of the present contention centres on the view advanced in support of it (sect. 102), that a morally good action need not give rise to good, nor an evil one to evil. This is opposed to a well-known passage in Green;[2] and I believe Green to be right. If, in the temporal succession of events, every characteristic of an action has its necessary sequel—and this surely is inevitable—then the character of good, that in virtue of which it is able, *pro tanto*, to satisfy desire, cannot fail to have a relevant consequence, in whatever shape. It is quite true that such a "good" may provoke evil, or from a higher point of view may itself *be* evil. But this consequence or character will not annihilate the goodness or satisfactoriness contained in the action, to which the nature of the evil which it is or provokes must always be relative. The conduct of a high-minded reformer and of a selfish demagogue may each of them lead to public disorder, which may call for repression and end in reaction. But the elements at work in the sequence will, so far as the reformer at all achieves his purpose (and if not, his relative good will not be attained), be different in the two cases; in the one the evil produced will be of a higher type, farther on—so to speak—in the dialectic succession, and the relative solution arrived at will comprehend larger elements. In short, the necessity of evil is only tenable because evil has a common root and nature with good—is, as it were, good in the wrong place, as dirt is matter in the wrong place. It is, therefore, that good can enter into evil, just as evil can enter into good; and the principle that evil must come, and must come of good, is no obstacle to the view that the good of a good action is always preserved.

I am not saying that we can help or hinder the advent of the supreme good, because I do not know that we can act otherwise than we do. But I think it clear that in

[1] Green, *Prolegomena*, sect. 377-379.
[2] *Ibid.*, sect. 295.

as far as any one acts well, there are fewer stages to be traversed before the advent of the supreme good, than if he acted ill.

I have so far argued against the author (*a*) that in morality it is a grave defect for the criterion to be extraneous; (*b*) that it can only be applied through a systematic individualised construction; (*c*) that achieved good remains, even if it passes through the form of evil, and therefore if we see our way to what has the character of good, we need not be sceptical as to further tendencies, except on positive grounds which we must estimate in judging it good.

We may now approach the discussion on the two proposed criteria, Perfection and Pleasure, so far departing from the author's treatment as to take Pleasure first (points 2 and 3 of sect. 102), because I hope that the criticism developed in discussing these will be of use to us later on, in dealing with point 1, the alleged uselessness of perfection as a criterion.

I. Point 2, then, is thus stated (sect. 102), "that the Hedonic computation of pleasures and pains does give us a definite criterion, right or wrong". We should note that Psychological Hedonism being dropped, the Pleasure of All, of course, is the proposed criterion. The discussion of it begins with section 111.

(*a*) We shall readily admit to the author in general that "we know what a pleasure is, and what a pain is, and we can distinguish a greater pleasure or pain from a lesser one".

There are, however, states of consciousness, as he points out, about which we can hardly be sure whether they are pleasures or pains, and many cases in which it is hard to decide which of two pleasures or pains is greater. But, he argues, a difference of which we cannot be sure must be less than any appreciable difference, and a possibility of mistake thus limited can only concern a very small amount of pleasure. The uncertainty thus arising, it is implied, does not show that the criterion by calculation of pleasures fails to give a fairly precise decision. This contention, I think, must be admitted; as here we are not raising the question whether the criterion is right or wrong, but only whether it gives an answer at all. In speaking of its correctness we shall have to recur to this point.

(*b*) Next comes the objection based on pleasure being an abstraction. It is urged, the author says, that for this reason "pleasure" is an impossible criterion, being something, in fact, which nobody experiences. The objection, thus stated,

is *primâ facie* readily disposed of, by help of the analogy of the exchange values of heterogeneous commodities. As regards the present question, whether pleasure gives a criterion that can be used, this is decisive so far as the mere fact of abstraction goes. But it does not show that a quantitative unit can, in fact, be applied to abstract pleasure,—a point which will occupy us directly.

I am accustomed to regard this objection from the abstractness of pleasure as holding more especially against its correctness as a criterion. With a view to that issue I will here merely note that the author's defence inevitably implies that all equal amounts of abstract pleasure, including equal algebraical sums of pleasure and pain, are ethically interchangeable. This is subject of course to his final reservation on the limits of applicability of the criterion.

(*c*) I will follow Mr. McTaggart in discussing at this point (sect. 114), the objection that pleasures vanish in the act of enjoyment so that a sum of them cannot really be possessed, though this, as he points out, is an objection against pleasures forming the supreme good rather than against the Hedonic criterion.

The author's reply is in effect that while we live in time any good whatever can only manifest itself in a series of states of consciousness. If we say that the states in which perfection or the good will are manifested have the common element of their characteristics running through them and uniting them, he answers that pleasant states have the common element of pleasure. If we urge again that pleasure is an abstraction and so knits the successive states but slightly together, it is replied that every pure identity running through a differentiated whole is to some extent an abstraction, by abstracting from the differentiation. Perfection or the good will, therefore, if conceived as timeless elements of a consciousness existing in time, are just as much abstract as pleasure under the same conditions; while if a timeless consciousness could come into being, a feeling, such as pleasure, would be as fit, or fitter, to enter into it, than a state of cognition or volition.

Here I am strongly convinced that the anti-Hedonist does not get substantial justice from Mr. McTaggart. His analysis seems to let slip the peculiar nature of the experience in question. To begin with, I am for once not satisfied that the logical point is rightly stated. An identity, which is sustained by the co-operation of differentiated parts, is surely on a different logical footing from an identity which lies in a general quality, common to two contents,

or persisting in a single content. The former is such as the power of a machine to do certain work, the latter is such as the colour it is painted. It is true that each can be stated in a single phrase, and thought of, up to a certain point, in isolation from the machine as a whole. But the former cannot be truly thought of in this way, that is, if so thought of, it cannot be understood; while the latter loses little if anything by being thought of in isolation. Identities of the former type I should naturally call concrete, and only those of the latter type abstract. It may be only my King Charles' head, but I almost suspect that a tacit confusion between identity and similarity is here playing us a trick. A true concrete identity is based on differentiation, and is curtailed by abstraction, *qua* identity, in the same ratio in which the differentiation itself is so curtailed.

Now a consciousness, even a consciousness in time, in so far as it realises a degree of perfection or of the good-will, is an identity of the former type. A consciousness of which we only know that it realises successive states of pleasure, need only contain an identity of the latter type. The former is held together by a unity touched only at its margin by succession. Its edges are washed by time, but its own elements are not in succession to one another. The latter, for all we know, may be a succession having in common almost no assignable element of unity at all. We really can say hardly anything as to the minimum conditions involved in a succession of pleasant states. But we can say, I think, that taken at any two points of the succession it need exhibit no tendency whatever to grow towards totality. The old criticism remains therefore unassailable, that the hundredth pleasant state need find us in possession of no more pleasure than the first. With perfection or the good will this is not so. The accidents of life may frustrate their development; but in so far as they display their nature—and this is surely the case we ought in fairness to consider—they involve a certain structure of the mind and character, of a logical type which necessitates an appreciable achievement of harmonious structure, and a progress in the same direction.

It may be urged that succession in time is a false appearance, and that in the reality the vanished states of pleasure cannot be lost, but must be gathered up as parts of the timeless whole.

But granting this reply to be just, it comes equally to the aid of the good-will in respect of the successiveness which attaches to its realisation in time. Only, whereas in the case

of pleasant states the character of totality may hardly have begun to show itself, in the case of a realised perfection it already to some extent is achieved. In the former there is a new character to be created, in the latter only a defect to be removed. I feel sure that to call perfection and good-will "just as much abstract" as pleasure, is an overstatement. I judge that in the general line of this argument I should have Mr. Taylor's assent.

No doubt the difference between Mr. McTaggart and myself as to the reality of a sum of pleasures is accented by our disagreement as to the Hedonic criterion. Pleasure indicates satisfaction much less closely and less correctly for me than for him.

(*d*) The next question to be raised is whether Pleasures and Pains can not only be compared in magnitude, singly, each to each, but can be compared in sums themselves obtained by addition or subtraction. So far as the discussion hinges on the theory of intensive quantities I will defer it to the point at which the author deals directly with this subject (sect. 122).

Before coming to this, however, we have to meet an argument based on introspection (sects. 116-7), which urges that in everyday non-moral action, and also even in non-Hedonist morality, we do as a fact continually decide questions which involve the comparison of pleasure-totals formed by addition and subtraction. The appeal to introspection is particularly interesting, as I implied at starting, in the present situation of the Hedonist controversy. If it is conducted with care and frankness it ought to lead us far towards ascertaining the reason of our differences. I find the verdict of introspection on cases of the kind adduced to be not quite simple, and I believe there is risk of misinterpretation. The examples offered by the author are such as a choice between two dinners of equal cost and wholesomeness—must we not and do we not here add together the expected pleasures within each alternative, and come to a decision by comparison of the sum-totals? Or in choosing between means, themselves morally indifferent, to a given moral end, or in trying to give pleasure as such to others—a duty, the author urges, on any moral theory—or in weighing the importance of an intense feeling against that of a number of weaker feelings in the same person or in others; in all these cases, it is urged, we do actually come to a decision; and either we must arrive at it by addition of pains and pleasures, or we must admit that we are working in the dark.

The verdict of introspection in these cases seems to me,

as I said, not quite simple. On looking into the author's account, we note that he appeals to introspection mainly for the fact that such cases exist, and that we feel ourselves able to decide them, and that we should not admit our decision to be merely capricious. That, in deciding them, we compare totals of pleasure and pain, is not so much accepted from introspection as argued from the impossibility of any other alternative in face of the admissions of introspection.

Perhaps we might try to carry the matter a little further in the province of introspection, and see what result we can get. There are well-known cases in which we seem to come as near as we ever can to the attempt to balance totals of agreeables and disagreeables against each other on their own merits. I am thinking especially of the deliberations in which we make plans for a holiday tour, when we have to choose a route of travel with longer or shorter sea passage, to decide whether to take tickets for train *de luxe* or first or second class, whether and when to break the journey, and so on.

Now obviously we do go over in our minds the *pros* and *cons* of plans consisting of such combinations as these, and we try, in some way or other, to balance the several plans against each other with regard to their respective agreeables or disagreeables. Probably experiences will differ as to how far we can make up anything like a sum-total of pleasantness in favour of each plan. I should be inclined to say that we do not succeed in getting anything like a single resultant of pleasantness or unpleasantness for each alternative plan, but continue to think over the attractive and unattractive elements of each as so many distinct features of it. No doubt we arrive at being aware that one plan has more disagreeables attaching to it than another, and we form an impression whether another plan has any grave inconveniences which outweigh this number of nuisances. But, so far as my experience goes, I do not believe that one arrives at a consideration of each plan, including all its attractions and the reverse, as a homogeneous amount, in which the items are merged.[1] We keep recurring, rather, to the actual content of each plan, and consider how far it corresponds to what we want; that is to say, how far its details do or do not satisfy the conditions failing which we should pronounce our holiday "spoilt". This comparison then is hardly a true quantitative comparison. It passes from enumeration with

[1] This is surely the true test whether or no we have got a quantitative total. In a true "sum" the peculiarities of the items are lost. 200 lb. is 200 lb. whether you are weighing children or coal. If the nature of the items affects your choice your choice is not based on quantity.

very rough feelings of magnitude into something more like estimating the degree in which, say, a number of architects' designs meet the requirements in view of which they have been framed. "The degree," it may be replied; "then your comparison is quantitative after all." This example I think extremely significant. Suppose there is a competition of designs, and you give marks for the degrees in which requirements are fulfilled; or, indeed, we may take the case of any examination in which marks are given. This is a rough way of symbolising the relation of performances to requirements; but it it is not the result of a calculation, or true handling of quantities, except in so far as requirements are subdivided, separate marks assigned for conformity to each, and subsequently added together. But we know that the more this is done, the less reliable the result becomes; and a highly skilled assessor or examiner, if compelled to use marks instead of reporting in detail, is inclined, I suspect, to make sure of his totals first, and subdivide them afterwards, *i.e.*, to "cook" his marks for details. And the reason is that in each case you are translating the fulfilment of concrete conditions into the bare form of quantity, and the more the arithmetical element enters in the more is the bareness of this form perceptible. If I prefer this design very greatly to that, I may simply give the one 200 marks and the other 100; but it would have made no serious difference if I had said, instead, 180 and 100 respectively. I convey, roughly, the fact that I think the one a good deal better than the other. But if I take 200 as full marks and try to divide the requirements to be satisfied into ten heads with twenty marks each, and assign marks on this hypothesis, and sum them into totals, I shall probably find my total fail to express, even roughly, my true preferences, unless I have as above suggested adjusted the subtotals to the total required. And the reason is that the process is not a result based throughout on the handling of quantities. The relation of each character in the design to a requirement, and of each requirement to the whole, is concrete and individual, and needs to be represented in the intelligent language of a detailed report; these relations are not quantities; and the reduction or rough translation of the mere fact of preference into quantity, as a *memoria technica* for comparison *ad hoc*, has an accidental element. In a single preference this matters little, because re-translation is easy; but in the arithmetical handling of a number of preferences it tends to monstrous errors. Or a simpler case may put the point clearly enough. Let the question be which of two pocket knives, or guns, or micro-

scopes, will suit me best. Of course in preferring one to the other I make a comparison which, *qua* comparison, has a quantitative side. But to try to reduce it to the bare form of quantity by, say, giving marks to the competing objects for their different qualities, would be darkening counsel. I have the requirements and the performances directly before me, and can estimate in the concrete how far the one is adequate to the other. To substitute an arithmetical process for this comparison would be a loss by abstraction, even if it were possible. The true typical case, under which all these choices should be ranged, is, I suggest, the comparison of theories with reference to their truth, that is, with reference to their comparative adequacy in view of a given scientific situation.

With reference, then, to complex totals of pleasantness, I am not maintaining that introspection wholly denies the possibility of comparing them. I am rather arguing that it gives the limit of the process, in the consciousness of a number of elements, which we do enumerate and more or less attempt to weigh against each other. And I urge that in the attempt to push this process further it inevitably passes into another, of which the ultimate type is found in weighing theories with reference to their adequacy.

And Introspection seems to convince me of a further point, which may be due to my prejudices, but *primâ facie* is a datum deserving to be considered.

I am pretty sure that the ordinary mind does not like these attempts at complex comparison of sheer agreeables and disagreeables. We enter upon them only when considerations of interest and efficiency fail us. We find them most troublesome and unsatisfactory, opinions, even within one's own mind, varying about them in a remarkable way. It may seem to contradict this statement when I agree that such a choice as that between the two dinners (though I cannot remember—and here others agree with me—ever to have made a choice that fulfils the supposed conditions) might be readily made. I believe the reason of this to be, however, that one would be guided by the first liking, or more probably, disliking, that came to hand. We should be uneasy to find ourselves reflecting in cold blood on such a subject, and we have, rightly as I think, been trained to make choice in matters of that kind without displaying deliberation. I think therefore that even this experience really supports the opinion that the whole business of calculation, as applied to pleasantness, seems to us a *pis aller*, an undesirable preoccupation of the mind, which we only submit to when we can think of nothing better.

When we come to anything so serious and demanding so much precision as weighing something important to oneself against something affecting a number of others, but probably much less important to each of them, I feel sure that we do not proceed by balancing a single intense feeling against a sum or indeed a product of weaker feelings. To multiply a weaker feeling by twenty or thirty, not to say a thousand or a million, and set the product against a single intense feeling, is, I am sure, something which we cannot even attempt, though the questions in which the use of a Hedonic criterion would require it to be done are of everyday occurrence. Our decisions in cases of this kind must rest, I think, on the acceptance of some hierarchy among the activities of life, and an opinion as to which of them will be most hindered by our conduct under the circumstances.

It is to be borne in mind that taking perfection as our criterion we are not barred from recognising pleasure as an evidence, when no better can be obtained, of certain elements in it, because we are working with a comprehensive idea of satisfaction; while adopting a Hedonic criterion, on the very ground that it can be applied with precision while degrees of perfection are unknowable, we are barred from supplementing it by any other tests of satisfaction.

Indeed, one cannot help feeling that in some respects the Hedonic criterion brings us back to the standpoint of Psychological Hedonism. It is much, no doubt, to have broken the circle of Egoism. But still, though the abandonment of Psychological Hedonism involves the position that our main desires are for objects which satisfy, and not for pleasures, the Hedonic criterion debars us from using directly the character of satisfactory objects as such for a test of what is likely to satisfy. I shall return to this point in dealing with the correctness of the Hedonic criterion.

One word on the argument (sect. 117) that morality itself requires us to choose, *ceteris paribus*, pleasure rather than pain, and to aim at giving pleasure to others—a requirement which cannot be fulfilled without calculation of pleasures and pains. I reply in substance by pointing to the result which we drew above from the comparison of pleasure, as a measurable aspect of action, to the exchange value of commodities. In strictness it followed that all equal amounts of pleasure, however compounded, were ethically interchangeable.

I do not believe that the moral consciousness endorses the alleged moral requirement, as it would have to be construed in face of this strict interpretation of amount of pleasure.

We never, I believe, feel ourselves bound to compare abstract amounts of pleasure either in our own behalf or in that of others. We never, that is to say, try to compare them impartially, going out of our way to look for the greatest possible quantity. We do feel bound to promote the life and satisfaction of ourselves and others; but such promotion always involves a reference, even if tacit, to definite lines of living and enjoyment, presupposed in our general standard of life. It may be objected that this is bringing in the reference to welfare or perfection, which was *ex hypothesi* to be excluded. It amounts, we may be told, to denying that the *cetera* ever can be *paria*—that morality can be indifferent as between two ways of enjoying ourselves. What I desire to urge on the other hand amounts to this, that life after all is a unity; and the very fact that two modes of enjoyment seem to me ethically indistinguishable, and also that I want one of them more than the other, is a fact, not strictly indeed of my morality, but of the determinate structure of my being.

Now I deny that I feel bound to consider, as in strictness I should according to the theory before us, which of these, or whether any other course, will bring the greatest pleasure as such. I do what I want most, or what attracts me most, and, morality not forbidding, help others to do the same for themselves. Of course, Psychological Hedonism being dropped, it cannot be assumed that this *means* acting with a view to the greatest pleasure of myself or others. The question before us is, which way of looking at the matter is usually acquiesced in; as an argument to show which the moral consciousness demands. What I urge is, that we accept our wants as being along certain lines, grounded in the positive unity of our nature, even when outside morality. There is no impartial scrutiny of experience, to find where the greatest pleasure can be had, except *de minimis*, when we feel that we are out of touch with the true test, which is, simply, what we *really* want.

(*e*) In sections 122-3 we come to the direct argument against an objection to the effect that pleasures, being intensive quantities, cannot be added and subtracted. The way in which this is met seems to me unsatisfactory.

The form of the objection is taken as an admission that pleasures being intensive quantities are quantities. From this the characteristics of quantity in the fullest sense are inferred of them, *e.g.*, that they can be brought into numerical relation with other quantities of the same kind; and that you can affirm the pleasure in A to = the pleasures in B

and C together. Thus it seems to follow that the difficulty which is practically found in equating them is merely analogous to the liability to error attaching to all quantitative judgment whatever. And so there comes out the result that pleasure is as good a quantity as feet and inches, only rather harder to judge of in practice.

But this seems to me to presuppose the point at issue. It is clear that pleasure, so far as quantitative, is intensive, but the question is how far it is quantitative. Intensity, it may be agreed, involves the idea of a more or less of the same; but there are plenty of perceptions of more or less for which no measurement by a constant unit, and therefore no true quantity, has been or apparently can be established.[1] It is a matter of words whether we call such perceptions quantitative. But it seems clear that if they are quantitative, it is in a sense which does not involve numerical relations. To judge that A = B + C, is beyond the mere perception of more and less, which involves neither a judgment of equality, nor an analysis of one term into two definite quantities. But it is short of numerical comparison, which surely must be taken to demand a total of units on one side of the equation at least.

Thus I do not find the difficulty where the author finds it. I do not see that "intensive" is a ground of objection, if "quantity" could be proved applicable. But to refute an objection based on "intensive" is, to my mind, in no way to establish the proof of "quantity". That must be independently sustained. The possibility of establishing anything like a true unit for amounts of pleasures and pains, even supposing the two could form part of the same quantitative series, is a psychological problem which I do not feel competent to discuss. It would seem necessary first to show not merely that all pleasure and pain is homogeneous *qua* pleasure and pain, *i.e.*, distinct from other elements of feeling and content (which was admitted provisionally on sect. 112), but that it is capable in itself of being represented by degrees of a single series, *i.e.*, has only one dimension,[2] so to speak. And then it would be necessary to show that the degrees of this series were true units, such that a number of them might be taken as a true multiple of one. Considering, *e.g.*, the peculiarities of the sensation differences

[1] I should say that the intensive and extensive aspects are both of them necessary to quantity in the strict sense. But without raising this difficulty, it seems plain that numerical comparison cannot be had without the establishment of a constant unit.

[2] Mr. Taylor has pressed this point upon me in conversation.

dealt with in Weber's law, it would seem as if great difficulty might be met with here. Though pleasure may be homogeneous, its stimuli are heterogeneous; and any attempt at measurement would here lack the support which the precise variation of the stimulus affords to experiment with the specific sensations. The economic analogue of Weber's law seems subject to extensive reservations.

(*f*) There is a further point, affecting the workableness of pleasure-pain reckoning, to which my previous remarks on the tendency to convert it into another method may have served as a preface. I may call it the relativity of pleasure.

If Hedonic calculation is to be true calculation it must start from definite magnitudes, which must be traceable, through purely quantitative processes, down to the results obtained. If, in the deliberation which is to be represented as calculation, an object becomes more attractive, it must have been shown to carry with it a new pleasure which has had to be added to its original pleasurableness. If it becomes less attractive, it must have been proved to carry with it a pain which has had to be subtracted from its original pleasurableness. Its original pleasurableness, in short, is a magnitude which can only be modified by addition or subtraction. Even if outweighed by greater pleasure incompatible with it, the original pleasurableness should still remain as a weight in the lighter scale. The magnitudes should be constant for the whole stretch of life to which a single deliberation applies; or at the very least throughout a single deliberation.

But in fact, as it seems to me, the magnitudes of pleasures and pains are reacted upon by the combinations conceived in deliberation, or met with in life, in a way wholly incompatible with that just described. A pleasure which seems strong at first, simply fades away in the light thrown upon it by a certain combination of objects of action. It need not be cancelled by associated pains, nor overbalanced in the scales by greater imcompatible pleasures. For that ought to mean that it continues *per se* to be as pleasant as before, but is shown, owing to circumstances, to bring with it a pain not before observed to attach to it, or to be outweighed by incompatible pleasures not previously noticed to be possible at all, or to be incompatible with it. Its original magnitude should subsist, like that of a pound weight in the scales, whatever you add to its side or the other. Or even if you say that you subtract from it by cancelling part or the whole of its magnitude, by reason of combination with a negative quantity, as you may withdraw a pint of water from a quart, still its

original magnitude should subsist ideally, and be traceable by arithemetical laws in the result of the deliberation.

But what happens in every deliberation upon serious matters is not in the least like this. The *primâ facie* magnitudes of pleasures and pains change their amount or their sign with the combinations in which they are considered, because of the way in which those combinations alter the direction of our interests and our wants. Interest, satisfaction, expected pleasure, are not constant magnitudes attaching to particular acts or objects, but are determined by the whole fabric of purposes and satisfactions which life presents before us from moment to moment. Now it is the essence of deliberation to change this presentation by readjusting the emphasis of its outlines, completing some and obscuring others. In this process some things which fell *primâ facie* in a main line of interest are shown not really to be so. Other things, not attended to at first, take the place of the former and promise a satisfaction which they cease to offer. A man is reading an ordinary novel with enjoyment. A newspaper comes in with exciting intelligence; perhaps with the continuation of a controversy in which he is profoundly interested. He does not subtract the enjoyment of going on with his novel from the greater enjoyment of reading and discussing his newspaper, and turn to the second in virtue of the surplus of pleasure to be gained by doing so. The momentary adjustment of his interests is modified. The novel, for the time, has ceased to please. Our interest, as we say, is called away. This is not an effect of relations of magnitude. It is an effect of the peculiar bearings of the various objects of life upon one another, according to the shape which our plan of satisfaction is able to adopt at the moment. Relations of magnitude, as we said before with reference to the assignment of marks, are the effect, but not the cause. It is as if one thing were not merely outweighed by another, but lost its weight in a certain comparison, or as a colour which is pleasant in one combination becomes painful in another. The new fact is not, or at least need not be, pain of discord less pleasure of colour, leaving overplus of pain of discord. The colour is now differently seen, and now seen as painful throughout. And deliberation just means readjusting the combinations in which things are seen. The object itself is altered. There is not a persistent Hedonic effect which is overbalanced.

It might be objected that these consequences cannot be lawless or irrational, and that if we knew the actual nature of the interests concerned we could, theoretically, deduce or derive their bearing on each others' Hedonic effects from

their nature, and this would be the required Hedonic calculation. But my point is, that the laws of the combination, though certainly not irrational, are yet not arithmetical. They are the laws of the logic of desire, by which its objects include, modify, reinforce or supplant each other; and they deal in every case with the growth of an individual concrete whole, perpetually modifying itself. Deliberation which consists in a phase of the life of such a whole differs in principle from the type of calculation.

In answer to these remarks Mr. McTaggart would perhaps refer me to that part of his argument (sect. 132), in which he maintains that Hedonic calculation is not always a correct guide to the fuller development of our ideals, but only to their fuller satisfaction by the environment. It is indeed probable that my difference from him consists in suggesting that the object of desire likely to give satisfaction under the conditions of present action is ascertained by a process much the same as that which he confines to the change or modification of our ideals in lapse of time. "Our desires," he says (*loc. cit.*), "have a dialectic of their own." The phrase seems just what is wanted to express the real determination of conduct with a view to satisfaction, of which, as I believe, Hedonic calculation is a travesty. I will try to explain further below.

II. So far we have been dealing on the whole with the question (point 2 of sect. 102), whether the calculation of pleasures and pains gives a definite moral criterion, right or wrong; though it has not proved possible to keep this wholly apart from the general discussion of Hedonism. Now we turn to point 3 of section 102 and ask (sect. 104)." Even if pleasure gives us a criterion which is applicable, does it give us one which is correct?"

The author's answer involves the distinction which has just been mentioned. The Hedonic criterion would be a trustworthy guide to that element of the Supreme Good which consists in satisfaction of actual ideals. To development or perfection of the ideals themselves it does not bear a uniform relation. Subject to this distinction, the positive argument advanced occupies only six lines. Happiness is proportioned to harmony with surroundings; if we aim at Happiness we aim at harmony between individuals and their surroundings, and this is to aim at one element in the supreme good. It should be noted that this argument if successful would destroy the relevancy of the objection taken above to an extraneous criterion. I believe however that this argument is itself irrelevant.

We are surprised to find a long chapter of a familiar controversy omitted at this point by the immediate identification of Happiness with the greatest quantity of Pleasure. I imagine that in the author's judgment his arguments to show that the summation of pleasures has a meaning, have removed the objections commonly made to this identification.

I am obliged to impeach this identification not merely from doubting the possibility of summation of pleasures, but for more direct reasons. I must therefore resuscitate the controversy in question, which, though it has the defect of belonging to an acute phase of the anti-Hedonist dispute, has the merit of turning our eyes directly on the experience under discussion.

I have tried to show that Hedonic calculation becomes unworkable just about at the point where if workable it would be applicable to the serious direction of life. And I now contend (point 3 of sect. 102), that if, by restricting ourselves to the more calculable levels we made it appear to be workable, the results would be unreliable or worse, even with respect to happiness or harmony with our surroundings.

I take the word Happiness to be primarily the name of a problem. It indicates, as I understand, that which would satisfy us, whatever it may prove to be. Whether it is or is not coincident with the greatest quantity of pleasure, is for me an independent question. Happiness, complete satisfaction, it may be conceded, must be what we mean by the good—that which we really want. But this does not establish the correctness of the Hedonic criterion until we know that this criterion points the way to happiness or satisfaction. This is the essence of the question before us. We have seen, in discussing the workableness of the Hedonic criterion, that it is extraordinarily impartial, *i.e.* that for it sums of pleasure and pain, compounded absolutely anyhow in complete abstraction from their contents, are equally choiceworthy if equal for Hedonic appreciation. We also saw that quantitative Hedonic calculation tends to pass into something else when we arrive at the more complex relations of life considered as a design.

Following up these suggestions, I am going to recur to the old topic of the pleasures of the natural man as the crux of ethical and æsthetic science. The whole *raison d'être* of these sciences when one first approaches them, certainly seems to be in the paradox that what is pleasant to the natural man is not right nor beautiful. If, one is inclined

to say, it were true that pleasure is the guide to the good and beautiful, then in face of so simple a clue, these elaborate sciences could never have grown up. The contradictions which arise in applying that proposition have been the real ferment through which ethic and æsthetic have developed. Now it is quite conceivable that in the body of the sciences these contradictions may be overcome, and the above proposition victoriously reinstated. But plainly we are going wrong if we do not give some weight to the facts which make the conflict so serious—make it occupy, in fact, the whole working area of moral and æsthetic life. It may be said that the radical mistake of the natural man is to pursue his private pleasure and not the pleasure of all; and that when this is set right, the great contradiction between pleasure and good is in principle overcome. And the idealist Hedonist of to-day of course takes general and not private pleasure as his criterion. But I would point out that in æsthetic there is strictly no such distinction as that between private and general pleasure; and yet the contradictions which arise in taking pleasure as the clue to excellence are more marked perhaps than they are in ethics. I mean simply that, except with rare and gifted minds, the natural man, in as far as he follows what pleases him, is certain to be wrong. In æsthetic and in ethic alike, let him ever so much set his heart on general and not on private pleasure, the bottom fact is that his only chance of obtaining the fuller satisfaction is to make an effort which is in the direction of the greater difficulty. This effort corresponds to the apparent contradiction which the principle of pleasure has to explain away before it can even appear to cover the facts. If quantity or pleasure is the guide, why all this effort and explanation? A natural answer comes: "In the application of our pleasure arithmetic". I have tried to show that this does not really work. But now I want to make a more positive suggestion on the lines indicated above.

I will recapitulate the data as I see them, data presented equally by ethic and æsthetic. Up to a certain point of complexity pleasures and pains seem comparable by a direct quantitative process. Yet the natural man, man in as far as he adopts the direct process, is always tending to be wrong in his choice, to be wrong, because he misses satisfaction, both by his own admission and by the test of critical experience. And, in our choice, we are all constantly tempted to be the natural man, and so to be wrong. And in this way we daily and hourly miss satisfaction. It is further granted that right choices would and do bring a relatively full satis-

faction, something which we ultimately prefer, and up to a certain point can acquiesce in.

Now, how does the natural man, in the sense of man *qua* following the greatest apparent pleasure, miss his satisfaction? What would the effort, which admittedly he fails to make, achieve for him? What is the source of the elaboration of ethical and æsthetic science?

You may say, "He does his Hedonic sums too carelessly. If he made a more serious effort he would do them better. Ethical and Æsthetic science consist of the theory of Hedonic arithmetic."

But it is very hard to see, if calculation were all, how difficulty and resistance should creep in, as they do. I suggest therefore another answer. He goes wrong precisely by attending to the more obvious characters of facile satisfaction. These are just the characters which can, apparently, be quantitatively estimated. The difficulty of the right choice comes from the need of attending to other characters. And these other characters are what ethical and æsthetic science develop. I will try to explain. There are pleasures which it needs no effort to enjoy. There are others which need effort to enjoy, and which need effort also to guard and sustain their enjoyment. The fuller satisfaction, by the unanimous voice of critical experience, belongs to a life in which the latter bear at all events a very considerable part. The fullest satisfaction to be had in human life is for normal natures only to be won and maintained with constant exertion. There can be no doubt that fairly full satisfaction is to be had, and there can be none, I think, that it is only to be bought with serious effort.

The "easy" pleasures, as I may call them in a word — those which are practically of universal attractiveness to healthy human beings—are the most readily treated as magnitudes by Hedonic arithmetic. They are on the whole I suppose what would popularly be called bodily pleasures. I do not mean to say that a hard and fast line can be drawn between them and the more arduous kind of satisfaction. But yet there is a pretty obvious distinction which runs through the whole of ethics and æsthetics. The "easy" pleasures, though they may vary from repose to the most strenuous bodily exertion, appear to "come natural" to the healthy body, and their excesses, though incompatible with true health, also "come natural". It is urged, as by Plato, that they lead to or are mixed with uneasiness; but, at the moment of impulse, they have no uneasiness to overcome.

The "arduous" pleasures, or better, satisfactions, have a complex character which embodies the whole ethical and æsthetic difficulty of which we have been speaking. No one doubts that the satisfaction which they give is fuller and more harmonious than that of the bodily pleasures or those which relatively approach the nature of the latter.[1] But every one, except perhaps remarkably gifted natures, experiences a certain resistance in the enjoyment of them. They involve an exertion comparable to that of serious intellectual work, a resolution of discrepancies, and a maintenance of unusual and exhausting moods of feeling. Nearly every one, I take it, has some little shrinking from reading or seeing on the stage the "Oedipus Tyrannus" or "King Lear". The spirit is willing, but the flesh is weak. The contradictions in a great tragedy are no doubt resolved, but their presence and the tension which they imply are just what gives the depth to æsthetic satisfaction. And so in ethics. To conduct a great enterprise bringing into unity jarring passions and interests is perhaps the fullest satisfaction in the world; but the man who is doing it would often possess greater pleasure if he were cultivating his garden.

The distinction we are speaking of is the same that James refers to when he points out that we do not speak of a victory over our ideals, but we do speak of a victory over our self-indulgence. And it is the foundation I suppose of Spinoza's contrast between the strength of passion and the weakness of "active" emotions,[2] or between *titillatio*, local or partial pleasure, and *hilaritas*,[3] the pleasure attending upon a fully organised intelligence. It is the old *primâ facie* distinction between yielding to temptation and doing right. The rejection of egoism does not destroy the difficulty in principle. We can yield to temptation for others as much as for ourselves.

Now it is a very heroic measure, as it seems to me, to assert in the teeth of this fundamental difficulty that quantity of pleasure is the clue to greatest satisfaction. Of course we are not to argue that the object which *de facto* we prefer must be preferred *qua* the greater pleasure; if we said that, we should be back in psychological Hedonism. Yet no doubt we must maintain, what all experience and science agree to, the greater happiness or satisfaction of the more harmonious living. But to maintain this on the quantitative

[1] *Cf.* in Mackail's *Life of Morris* "the physical craving for reading was unknown to him". I quote from memory.

[2] Joachim's *Spinoza*, p. 258. [3] *Ibid.*, 263 n.

basis is, I suggest, to maintain a true conviction on the wrong grounds.

I believe that common instinct is right and that, so far as true quantitative estimates can be carried, the peculiar experiences which I have called the "easy" pleasures will always have an advantage in choice from the facility and obvious intensity which so easily turn them into temptations. I do not believe that the main difficulty of ethics and æsthetics can be disposed of in this way by simply ignoring it. We must admit, I am inclined to hold, at least a possibility that greater quantity of pleasure, so far as the phrase has a meaning, might often go with the less complete satisfaction. All satisfaction must be pleasurable; but it is a misinterpretation of the appearances to say that the fuller satisfaction is the more pleasurable.[1] It is conceivable that pleasure should be a concomitant of satisfaction—which I take to be synonymous with happiness—without being proportional to it. A relation of this kind seems not impossible. It would involve the presence, in quantitative pleasure *par excellence*, of some element which in the higher satisfactions was present in a less degree, either absolutely or relatively. Violence of sensation, perhaps, is an example of such an element in the case of æsthetic enjoyment.

What can be meant by a fuller satisfaction which is not necessarily a greater pleasure? What I have in mind is such a difference as that between great art and literature, on the one hand, and "popular" art and literature on the other, or in ethics, between a serious and responsible undertaking and any kind of sport or amusement. The general theory of the contrast must be, I presume, that the former evokes our nature more nearly as a whole, and the latter more partially. But these phrases, "as a whole" and "partially," are deceptive when applied to an organised system, because in such a system the whole is not necessarily *more* in every dimension than the part. It is possible for the more total satisfaction to be preferred though possessing less violence or facility of feeling, because the logic of the desires works towards removing contradictions between their objects as much as possible. But intensity and facility of enjoyment may remain on the side of the partial excitement. And if intensity of absorption

[1] The tendency to assert any superiority in the form of a quantity of the nearest measurable element is so enormously strong that we cannot be surprised at the difficulty which the very greatest thinkers have in resisting it. Plato's famous argument, *Rep.* ix., is brought to a numerical result, though, as I hold, by this very fact he shows that he makes light of the quantitative shape.

seems in a sense to be rather on the side of the great tragedy or grave enterprise, still this intensity, stirring up all the paradoxes of our being from its foundations, need not be *primâ facie* an intensity of pleasure. There is also the point that any one who does not know pain has plainly omitted a great range of experience. It must surely be in some sense included in a complete satisfaction.

No doubt there is a tendency for elements which appear to be sacrificed in the intermediate grades of perfection to be restored as perfection is approached. What is a loss, and how far perfection can involve what to us would seem a "loss," is a most difficult problem, both in metaphysic and in such sciences as æsthetic. But it seems clear, as indeed the author's theory most emphatically demands, that we cannot exclude all transformation of common experience in the higher grades of perfection on the ground that it would involve a loss. And if so—if for example the world of sensation must be sacrificed in ultimate reality—there can be no general reason why intensity or quantity of pleasure should persist in such a way as to merit the names we give them.

It seems to follow that in some form or degree, after all has been said that can be said for the unity of body and mind, it will be necessary to rehabilitate the distinction between bodily or relatively partial, and spiritual or relatively total, satisfactions. A pleasure in which the bodily system as such is harmoniously excited, as in a game or sport at its best, must be fundamentally different from a far-reaching emotion in which the body is but secondarily aroused, as in reflexion on the triumph of a great moral or political cause. If it were possible that pleasure, in the direct and simple sense, could be proved proportional to the participation of the body in any activity, and not to the range of objective harmony signified to the intelligence through its activity (*e.g.* through a certain group of judgments or perceptions) we should have a theory which would come near to fitting the facts of introspection and of ethical and æsthetic analysis. Pleasure would then be a concomitant of satisfaction, but not simply proportional to it. The equivalent of pleasure in ultimate reality would not be annihilated by such a doctrine, for the body and all its feelings plainly must be represented there.

(*To be continued.*)

IV.—DISCUSSION.

IN THE MATTER OF PERSONAL IDEALISM.

THE present article takes its occasion from two very different events —the review of my *Limits of Evolution* by Mr. McTaggart in the July number of MIND, and the publication, soon afterwards, of the volume entitled *Personal Idealism*, by eight members of the University of Oxford. By the former, I am moved to say some things that I now discover to be very much needed for making my own position in philosophy clearer than my reviewer seems to have found it; by the latter, I am stirred to express what I must frankly admit are "very mingled feelings" indeed.

As to the essays by the Oxford Eight, one whose fortune it had been to put before the public some fifteen months earlier a theory bearing the same title of "Personal Idealism" might naturally be expected to greet with lively interest the announcement of a second book under that rubric; especially, a book issuing from the English seat of philosophy justly most venerated. This lively interest I have certainly felt, and I have accordingly turned upon the contents of the new volume, not merely with curiosity, but rather with the earnest hope of finding weighty auxiliaries for views which I count to be so inwrought with our greatest human concerns. I come back from the reading, in part fortified and encouraged, but in part, I fear in greater part, surprised and disappointed. I had supposed, of course, that the cardinal features of the system of Personal Idealism would be agreed about and accepted, if the title was accepted which had been chosen for it by its author. It is the adoption of the title in spite of rejecting essentials in the system, that surprises and in some measure discomposes me: and all the more when one finds his own lines of division for the discussion, and even his own topical titles, running through the book. It is because I hope to prevent misunderstandings on the part of the public, and to forestall a confusion of ideas in presence of an identical name used to cover very different conceptions, dealt with, above all, by very different methods, that I am prompted to comment on the Oxford volume, and to point out some of the more important divergencies between its conception of Idealism and that which I would call Personal.

That the book has great worth of matter, and will have much weight in the doctrinal controversy that is now upon us, follows of course from the known training and culture of its writers. In many regards, those who are in earnest about a polemic against the current anti-personal philosophies, monisms of one sort or another, may unquestionably rejoice in its courageous, outspoken, and resourceful assault upon Naturalism and Absolutism alike. And if one were to decide upon the philosophical meaning of a movement solely by the general aim of it, in disregard of its method, there would be little or nothing in the programme set forth by the Oxford Eight to which any idealist could demur. "The reality of human freedom, the limitations of the evolutionary hypothesis, the validity of the moral valuation, and the justification of that working enthusiasm for ideals which Naturalism . . . must deride as a generous illusion"—this unquestionably sums up well the cause for which every idealist works; nor could anything much better express the object with which my own volume was prepared. But one doesn't become an idealist simply by attachment to ideals, or by opposition to those aspects of Naturalism which assail the credit of ideals; otherwise many an empiricist, many a positivist even, might be called an idealist, and such a persistent railer at Idealism and all its ways as Prof. James might still rank as an idealist of idealists. Idealism is constituted by the *metaphysical* value it sets upon ideals, not by the æsthetic or the ethical, and rather by its *method* of putting them on the throne of things than by the mere intent to have them there. It is always distinct from Mysticism (which at the core is Emotionalism), and still more from Voluntarism. Its method is, at bottom, to vindicate the human ideals by showing them to be not merely ideals but realities, and to effect this by exhibiting conscious being as the only absolute reality; this, again, it aims to accomplish by setting the reality of conscious being in the only transsubjective aspect thereof, namely, in intelligence.

So the fact comes about that Idealism gets its essential character from its discovery that intelligent certainty depends on such an interpretation of reality as makes the knowledge of reality by the spontaneous light of intelligence conceivable; in short, that Idealism is necessarily Rationalism, or implies an apriorist Theory of Knowledge. No sort of Experientialism, so far as it is consistent, can rightly be called Idealism. Voluntarism, emotive Mysticism, it readily may be, but then it is simply Subjectivism; and if it be taken in cognitive terms, it cannot get beyond Sensationism, unable as it is to provide for any changeless and universal ideas with which to organise experiences into objects that are inalterably the same for all subjects and therefore abidingly real. Not even such a theory as Berkeley's (to which one of the eight essayists appears to hold, with some added helps from Kant) can be consistently called Idealism; for though it teaches that there is an immutable principle at the basis of our experiences, namely the

operation of the eternal ideas in the Divine intelligence, controlling God's communication of sensations to us, yet the assumption of this Divine Mind is unwarranted by the strict Experientialism from which the theory takes its departure.

One might have supposed that all this was settled beforehand, from the time of Locke. But in spite of its title, we find in the Oxford volume Experientialism running at large and everywhere: we find, in fact, (1) empiristic epistemology, (2) an organised new assault upon *a priori* cognitions, (3) a voluntarism of the most pronounced order, (4) ethical mysticism combating the mysticism of the intellect, and, finally, (5) a quasi-personalism resting upon the wholly experiential and purely temporal existence of conscious "individuals" added as a society to his own eternal being by the creative fiat of God. In short, not a single trait of *systematic* Idealism is present; the heart of real individuality, of real personality, is not reached, nay, even the serious attempt to reach it is foregone; yet the whole is brought under the name of Personal Idealism. The force of misnomer could hardly farther go.

One good, however, we shall in all probability reap out of the issuance from Oxford of a co-operative book with this title, and with the contents embraced: the attention of all the thoughtful in the English-speaking world, and even far beyond it, will now surely be drawn to the vital questions involved. Thence it may be hoped that the genuine idealistic implications of freedom, of evolutional limits, of valid moral valuation, and of justified enthusiasm for the ideal, will more and more clearly come into view. Not until this occurs, certainly, shall we get finally rid of those plausible makeshifts in the way of philosophy that leave our chief ideal interests still at risk, and so only serve to prolong the weary procession of philosophic disputes.

But I must pass on to deal more directly with my own attempt at contributing to this idealistic quest, and with Mr. McTaggart's very suggestive review of my book. I am much indebted to my reviewer for the care and the penetration with which he has considered my theory; and yet I notice some important respects in which he has failed to take my meaning. These I must set forth with all possible clearness, in the hope of preventing further misunderstanding; and then I shall have to reply to the objections which he raises (or, perhaps rather, the difficulties which he suggests) in connexion with my view.

I.

Judging by his other published writings, as well as by his review, I may fairly assume that Mr. McTaggart is in agreement with me in holding to an idealistic Pluralism, an eternal Society of many minds, each absolutely real. It is well to note, in setting out to comment on his criticisms, that there *is* a head under which his

views and mine might be correctly brought into collocation with the views of our Oxford colleagues, with those of Prof. James, and even with those of more pronounced individualists,—I mean the head of Pluralism: in one way or another, we all hold out for manifold realities that are all alike indisputable. But only some of us set this Pluralism forth by an idealistic method, and hence arrive at what we call the "eternity" of the many minds. By this we mean simply their absolute reality, or the self-based, self-active nature of their being,—nothing else at all, except as something else may be implied by this absoluteness; least of all, do we mean merely the everlastingness, their existence "from all eternity," as the common saying is. Our doctrine has nothing whatever to do with the superstition, born of fancy, about pre-existence. In this matter I suppose Mr. McTaggart to be in entire accord with me, and I am therefore somewhat surprised to note in his review certain misapprehensions of my position. These I will now specify.

(1) He speaks of my doctrine that only an eternal being can really be free, as a "remark". This language is seriously misleading; the reader must surely get from it the impression that my statement of this view is merely incidental and by-the-way. On the contrary, it is in fact basic and central to the whole theory of my book, is developed with emphatic prominence, and is argued out with much detail. (See my pp. 326-343.)

(2) A more important misapprehension is this: "It [the system of Personal Idealism] offers a God of whom personality, morality, and affection can reasonably be predicated, since, though perfect, he is finite. (I am not sure if Dr. Howison would accept the word finite, but in effect, it seems to me, he holds God to be finite, since he makes him one of a community of spirits, each of whom has 'a reality as inexpugnable as his own'.)" Indeed I do not accept the word, nor can. I am surprised that my real view in this matter should have escaped Mr. McTaggart. So far from holding God to be finite, I hold, and in my book clearly teach, that all minds are infinite (in the true qualitative sense of the word), and God pre-eminently so. (See my pp. 330 *seq.*, 363, and 373). Eternity, self-existence, self-activity, freedom, and infinity, are to me all interchangeable terms, and are so treated wherever they turn up in the course of my book. My reviewer falls into a *non sequitur* when he concludes that I make God finite because I make him one of a community of spirits, each absolutely real; not God's *finitude*, but his *definiteness*, is what follows from that. This confusion of the definite with the finite is very common, and is the explanation of two tendencies in sceptical thinking—the tendency to deny the personality of God, whose infinity is supposed to mean his utter indefiniteness, and the tendency, in recoil from the former, to assert God's finitude in order to save his personality, which of course must be definite. But the true infinite, as distinguished from the pseudo-infinite, the infinite of quality in

contrast to the infinite of quantity, is entirely definite; more definite, indeed, than any finite can be.

(3) Mr. McTaggart misconstrues my various statements about the imperfection in all spirits other than God. He supposes me to hold this imperfection to be incompatible with their being perfect in any sense whatever, and he mildly blames me for overlooking the classic distinction between the view *sub specie æterni* and the view *sub specie temporis*, whereby the seeming contradiction involved in an imperfect-perfect might be reconciled. But my actual doctrine about the spirits other than God is exactly his own. "*Sub specie æternitatis*, every self is perfect; *sub specie temporis*, it is progressing towards a perfection as yet unattained," he says. And the very quotation from me on which he bases his criticism (see my p. 363) expresses this, almost in open words: "The personality of every soul lies precisely in the relation . . . between that genuine infinity (self-activity) which marks its organising essence, and the finitude . . . to which the infinity [only another name for perfection] subjects itself in defining itself from God." So, too, though more explicitly, when I say (p. 374): "The perfection of the 'creature' lies just in this never-ending *process* of victory. . . . Thus its life shows its peculiar perfection by the mode in which . . . it surely, though slowly and with heavy toil, heals its own inherent wound." And yet again: "The infinity of the 'creature,' the infinity that embosoms finitude and evermore raises this toward likeness with the eternal".

There are sundry other passages in my concluding essay that affirm the distinction drawn by Mr. McTaggart between the complete self-adequacy of the spirit as a whole in eternity and the inadequacy of it as broken up in a time-process and engaged in a perpetual struggle to attain conformity with that eternal wholeness. In fact this distinction furnishes the whole basis for my reply in that essay to Prof. James's *Dilemma of Determinism*. I am really quite at one with Mr. McTaggart in what he says about the perfection of all eternal beings, in so far as they are eternal. I have usually avoided the explicit use of the word, because it is in many contexts misleading, and also because the too free use of it would engender prejudice in most readers, thus preventing the proper appreciation of the arguments offered for the world of real freedom. That world as I intend it, and habitually think it, answers to the principles of unity and harmony quite as Mr. McTaggart suggests.

Accordingly, my argument for the existence of God is not reached by those of his suggested objections which are founded on his assumption that I hold all minds but God to be utterly and totally imperfect, without any aspect of perfection at all. On the contrary, I hold, with him, that all eternal beings are perfect, each in its own way. But the way of God, I maintain, is the way of *absolute* perfection, which eternally excludes defect; whereas the way of every other mind is the way that includes defect, comes (or may come) to include sin, and only exhibits its perfection in its power to return to wholeness through the process of time.

That I have chiefly dwelt on perfection and imperfection as respectively the attributes of God and of the non-divine minds, without entering into the subtle distinction between *kinds* of perfection, is indeed a fact, but it should be regarded as a rhetorical rather than a philosophical procedure. That is to say, my book was aimed at readers of general cultivation rather than at metaphysical experts, and so I thought I should carry my new argument for the reality of God more surely home if I kept out of the region of the supersubtile, and relied upon those aspects of the difference between God and other minds which are the most obvious. The point of my argument, in this connexion, is that in God there is a perfection in which there is no imperfection at all, while in every other mind imperfection is present, though undergoing an endless process of cancellation. Of course, subtly analysed, this last means a species of perfection. But again my point is, that the sole possible basis for species in perfection is, primarily, the contrast between absolute perfection (excludent of imperfection) and perfection that embraces and proceeds to reduce imperfection; and, next, the manifold modes of which this second species is susceptible, resting on what I have called (see my pp. 363, 374) the "rate" of adjustment between the infinite (or perfect) and the finite (or defective) aspects of the mental being.

(4) In connexion with my argument for the existence of God, Mr. McTaggart makes this statement: "Among the different grades [of intelligent beings] which . . . are really possible . . . Dr. Howison assumes that the highest grade of all—that of the ideal Type—is one, and consequently that a being exists who realises the Type. So far as I can see, he does not attempt to prove this." Just what Mr. McTaggart means by his word "this," I am in some doubt—whether he is referring to my "assuming" that the ideal Type is one of the different grades of being that are really possible, or to my taking as a direct consequence of this the actual existence of the ideal Type.

As for the first of these matters, it is not true that I *assume* the ideal Type to be one of the really possible intelligences; on the contrary, I show (see my pp. 353-355) that this Supreme Instance of the intelligent nature present in all possible minds is the one salient certainty in our conception of the whole series, *when we view the series as conceivable simply:* whatever we can *not* tell about the series, or the numbers in it, what we *do* see, and see clearly, is that it must contain, as a possibility, this Type; this I treat as the implication in the entire process of definition by which other members in the series are determined.

And as for the second point, I do not conclude to the actual existence of the divine Type *directly* from its ascertained possibility; that would be merely repeating the thrice-buried Ontologic Proof over again, and the futility of that I have dwelt upon in my pp. 357-358. The identification of the divine Type as a necessary member of the *conceivable* series proves only this: that there is a

necessary connexion between the *idea* of every mind and the *idea* of God,—no mind can define itself except in terms of God. The argument to the actual reality of God is then completed by resorting to each mind's certainty of its own actual existence through dialectic verification: to attempt to posit the contrary, only ends in positing the self again. From this the actual existence of God follows, because the actual existence of the self must carry the existence of whatever the idea of the self synthetically involves. I can hardly imagine how my reviewer can have read pp. 356-359 of my book, and still say that I make no attempt to prove the actual existence of God as the ideal Type of all the really possible spirits; nor how he can still set it down that I *assume* the ideal Type to be one of the series of really possible beings, "and consequently that a being exists who realises the Type".

II.

But enough of these misapprehensions. I must now turn to sundry difficulties that Mr. McTaggart finds with some of the cardinal conceptions in the theory which my book illustrates, or else with my method of advocating them.

(1) He complains that after going closely with Kant to a certain point, I then suddenly separate myself,—"abruptly," as he says. By this he appears to mean my rejection of Kant's restriction of all our cognition to phenomena and denial of our power to know noumena. He implies that I nowhere give any reasons for rejecting Kant's criticisms on the Paralogism of Pure Reason, but go on to maintain that Pure Reason can know that the self exists, and exists eternally, simply ignoring these celebrated criticisms. It is a fact, of course, that I have not felt it needful to reply in detail to the various branches of Kant's agnostic doctrine, and especially not to his assault upon the possibility of proving theoretically the freedom and the immortality of the self. I have chosen to rely, rather, on a general refutation of the agnostic *motif*, which I have supplied in my first essay; and I have relied more especially on the self-refutation of Kantian agnosticism by its own inner dialectical dissolution, which I have traced out in the fourth part of my third essay. These very essential parts of my general argumentation, my reviewer appears to have quite overlooked. No reader who omits them will properly understand the argumentative procedure on which I rest my case in the seven essays taken together.

Besides, I have throughout assumed readers will see that Kant's agnostic restrictions are anticipated, provided for, and rendered inapplicable by the plain implications of the fact of *a priori* cognition itself, when that is once clearly established and clearly understood; and this fact I have explicitly argued out, in two different places in my volume—in the first essay, and again in the sixth. Then,

too, I have relied on the plain force of the essentially *social* nature of the self-defining consciousness to lead my readers to see how irrelevant Kant's agnostic tenets are. (See, particularly, my pp. 351-353, and *cf.* pp. 173-175.) That is to say, the Kantian agnosticism is annulled, so far at least as concerns the certainty of the existence, even the noumenal or eternal existence, of the self. In fact, however, my reviewer is a trifle out in saying I depart from Kant on this point, for Kant himself never supposed that *this* was unknown or unknowable: what was unknowable was, not the *existence*, but the *nature* of the noumenon. If nowhere else, then at all events in the *Prolegomena*, Kant declares unmistakably that the existence of selves as *Dinge an sich* is a known certainty. "That there are no *Dinge an sich*," he says in substance, "is absurd". (*Cf.* the *Prolegomena passim*, but especially in §57.)

(2) A more serious complaint is that which Mr. McTaggart makes that my reasons for treating the Categories as applicable to the self, when I refuse to describe it in terms of Sense Forms, are "not brought out anywhere in the book". This fault, if it is a fault, I have to confess. Within the limits of the brief volume I could not compress everything pertaining to a complete vindication of my general view. In particular, Mr. McTaggart's centrally pertinent question—Why are not the Categories in exactly the same position as Time, as to being necessarily trascended by the noumenal self?—could only be answered after a complete re-examination, going to the foundations, of the whole problem of epistemology. This would need to be taken up along Kant's own lines, and followed to the point where (at the end of the *Transcendental Analytic*) one gets into the position to show that, and just why, Kant has failed to establish the *objective* character of even natural science. It would then appear that, in order to give really objective value to *a priori* syntheses in Space and Time, we must combine a *pure* use of the Categories—a use unmixed with Sense Forms—with their use as "schematised" with the help of these Forms. Thus we should learn that there is no possible escape from the transcendent use of the Categories even when we attempt to employ them only transcendentally.

But not only did I feel that this epistemological inquiry was at once too long and too subtle for the public to which I chiefly addressed my book; I was also, in the case of more expert readers, relying upon a previous warning as to the general path the inquiry must follow, which I had given in my contribution to the volume entitled *The Conception of God*, at pp. 124-127. Still, Mr. McTaggart is quite right in pointing out that all this needs to be done in full detail before one can claim to have made a proof of Personal Idealism clear of *all* queries. And this I hope some day yet to accomplish.

(3) My reviewer finds a "weakness" in that part of my argument concerning the existence of God which aims at showing God's soleness (monotheism), in opposition to the charge of "polytheism"

or "apeirotheism" urged against my proposition that all selves coexist with God in eternity. He thinks the argument assumes "that beings who are equally perfect could not be different from one another". But it does *not* assume this; as I have already shown above, when clearing up the misapprehension about perfection and imperfection as applicable to the selves other than God. It does assume, however, that no beings who are *absolutely* perfect can be different, that is, none that are perfect without immixture of imperfection, and that are wholly supratemporal in their being. The conjunction of this unmixed perfection with eternity is what constitutes the proof for the soleness of God. Mr. McTaggart fails to get the force of it, I think, because he silently omits this divine *differentia* before the word "perfect" as I use it of God. And thus contrasting God and other selves as the Perfect and the unrelieved imperfect, he draws the unwarrantable conclusion about "superiority" and "inferiority" which he seems to dislike. But I intend no relation of this sort between God and the souls. They are *different*, and *unchangeably* different; they are even different *in species*, God being perfection eternally fulfilled, the other selves having a time-world of unfulfilment and having to carry it on toward the goal of fulfilment evermore. Thus the difference between them is in this reference permanent,—to answer my reviewer's question on this point.

(4) Finally, Mr. McTaggart objects to my calling this sole mind possessing absolute and eternal perfection God. He insists that the traditional usage shall be absolutely venerated, which makes God the name of one only self-existent Being, who brings all other beings into existence by creation *ex nihilo*. Here I am quite unable to agree with him. I not only do not think that this solitude of self-existence, conjoined with this universal efficient causality, is the central and essential thing in the traditional religious thought of Christendom, but I am sure that the most spiritually minded Christians would at once declare that it is not such; they would say, on the contrary, that the essential thing in the being of God is his holiness, justice, and infinite love. Now, what I point out is, not only that the function of creation, taken literally, is unessential to this moral perfection of God, but that it is in hopeless contradiction with it; and that the obscurely felt fact of this contradiction, a feeling growing ever more clear as the Christian consciousness grows more sure of itself, is at the bottom of all that restlessness in the region of Christian theology which we all know so well, and which is the characteristic fact in the later Christian world.

To remove the name of God from the clarified and purified conception of the eternal Ideal Type, would be to do violence, inexcusable affront, to the deepest and truest element in the historic religious consciousness. I feel the strongest assurance that my new interpretation of the name of God is the genuine fulfilment of the highest and profoundest prescience in the historic religious

life. What offends us in the Spinozistic or other monistic appropriations of the name God is the evident absence from their Absolute of all the essential moral qualities. In *these* it is that true Deity lies; and all God's metaphysical attributes must be keyed up to them; not one of these "natural" attributes dare be construed in any way that conflicts with the eternal moral essence. If they have been so construed historically (as indeed they have), genuine theology requires that God's conception shall be relieved of these errors, in order that his true nature may stand revealed as it is.

G. H. Howison.

NOTE IN REPLY TO MR. A. E. TAYLOR.

In publishing my article on "The Later Ontology of Plato" (Mind, N.S., No. 41) I was partly actuated by a hope that the views therein expressed might attract the attention of scholars better acquainted than I am with the minutiæ of Platonic criticism and thus lead to a reconsideration of the issues involved. They might agree with me or they might not; but at any rate there was a chance of new light being thrown on what is perhaps the most fascinating problem connected with ancient philosophy. I therefore welcome with pleasure the reappearance of Mr. A. E. Taylor in a field where he has already displayed his competence, and although my interpretation of the *Timæus* has not the advantage of his support I shall look forward with interest to the article in which it is his intention to controvert it.

Meantime as Mr. Taylor has tried to discredit me in public estimation by citing a number of alleged inaccuracies and oversights from the article referred to I feel bound to examine the charges *seriatim*, not taking them in the order of their occurrence, but, for greater convenience, in the historical order of the opinions to which they relate.

Beginning then with *Parmenides*, I am censured for making the "remarkable assertion" that he identified space with pure reason (Mind, N.S., No. 45, On the First Part of Plato's *Parmenides*, p. 2). Several propositions are involved in the obnoxious sentence, and I cannot tell to which of them Mr. Taylor objects. Am I wrong in translating that operation which Parmenides calls νοεῖν by "pure reason"? or in assuming that he identified νοεῖν with εἶναι? or that his description of Being exactly fits space? If I err, I err in good company, for Gomperz represents *Parmenides* as holding that reality (*das Reale*) is both extended and thinking.[1] But as the Eleatic master altogether denied plurality and distinction within the sphere of Being this was to identify thought with extension, or space with reason, for in this instance the words may be taken as equivalent; although if we were talking about Spinoza it would be most dangerous to do so. And Schwegler, Erdmann, and Windelband seem to be of the same opinion.

Mr. Taylor finds me speaking of the unanimous tradition of Greek philosophy that like can only be known by like in a way that shows my forgetfulness of the "rival doctrine of perception by opposites hinted at by Heracleitus and elaborately worked out by Anaxagoras" (*ibid.*). I presume he is referring to a fragment of

[1] *Griechische Denker*, i., p. 145.

Theophrastus quoted in Diels' *Doxographi*, pp. 499 *sqq*. If so I must remind him that the opinions given there relate not to knowledge but to sensation (αἴσθησις). It is of no importance what views Heracleitus held about the senses and their mode of action. We are only concerned about his theory of knowledge, and as to that we have the evidence of Aristotle, who tells us in the *De Animâ* that according to him the soul is, like the universe, in a state of flux, "for the moving is known by the moving" (τὸ δὲ κινούμενον κινουμένῳ γινώσκεσθαι).[1] And this is confirmed by the substantially equivalent statement of other authorities that Heracleitus represented the soul as fiery. Moreover we have it on his own direct authority that "the dry soul is the wisest and best"—wisest because most like the elemental fire. And drink makes men foolish by moistening their souls, bringing them, that is to say, into a state opposite to the reality of things. Now on Mr. Taylor's theory of Heracleiteanism true wisdom would consist in following the prescription of the hermit-sage, and having not only "some beer" but a good deal of it.

With Anaxagoras the case is rather different, and I must confess that I overlooked him. He affirms that the cosmic Nous is unlike everything and knows everything. But Aristotle tells us that in taking this view he stood alone, and that he neither gives nor suggests any explanation as to how this knowledge is obtained.[2] And even this exception is only partial. For Anaxagoras would not have denied that we know the cosmic Nous as well as the scattered portions of it in other men, in animals, and in plants by the like nous in ourselves. So far as knowledge in the Greek sense goes there is no question of a school, nor of an elaborately worked out doctrine of generation by opposites. Diogenes of Apollonia, who seems to have set up a fashionable Anaxagorean school at Athens, abandoned this part of the master's theory, and by identifying the Nous with air restored the principle of cognition by likeness.

It appears then that by writing "almost unanimous" for "unanimous" my statement would be made strictly accurate. Mr. Taylor, I suspect, would have to give the printer much more trouble if he tried to bring his criticism into accordance with fact and logic.[3]

I remarked that Plato would not have agreed with Descartes in holding that the idea of perfection involves that of existence; and Mr. Taylor "entirely fails to see how this is to be reconciled with" a passage he quotes from the *Sophistes* (p. 1). I have studied the passage long and earnestly but "entirely fail to see" what it has

[1] 405 *a*, 27. [2] *Loc cit.*, *b.*, 20.

[3] While I am about it, I wish to take this opportunity of correcting another regrettable inaccuracy. In the article referred to I quoted Plato as saying that he "had never met a mathematician who could reason" (p. 39). I should have written with Jowett "hardly ever" (μάλα γέ τινες ὀλίγοι. *Rep.*, 531 E).

to do with the question. Plato is assuming—rather tentatively and provisionally as it seems to me, but that does not matter—that whatever exists, exists wholly (γέγονεν ὅλον). It is "in itself complete," so to speak; it either is or is not. Even Becoming—whatever a Greek Hegel might say to the contrary—verily *is*, and is not half in and half out of existence. Let Mr. Taylor if he likes call this existing perfectly, and let him say that with Plato the idea of existence involves the idea of perfection. But this—which sounds rather Spinozistic—is not what I mean by perfection, nor what Descartes meant. This can be easily proved. No fact in the history of philosophy is more certain or better known than that Descartes was quite sure of his own existence. It is equally certain, though less well known, that he was also sure of his own imperfection, and on the same evidence, namely, that he doubted. Now if ὅλον means what Mr. Taylor seems to think it means Descartes should have thought himself perfect, at least if he agreed with Plato. But I submit that he took perfect in an all round sense, including above all moral excellence. And it is in that sense that I predicate perfection of the idea of the Good, which according to Plato so far from involving the idea of existence actually excludes it. If Mr. Taylor were right, the passage from the *Sophistes* would imply a belief on Plato's part that the Athenian democracy was perfect, which, as another Greek writer would say, is absurd.

And now I come to the most important allegation of all, which is that I wrote my article in such haste as to overlook a passage in the *Timæus* which Mr. Taylor considers "the strongest and most emphatic declaration of the 'separation' in some sense or other of Idea and sensible thing to be met with in the whole of the dialogues." For in his opinion this passage contradicts what I call Plato's refusal to acknowledge an independent and isolated existence of the Ideas. "In some sense or other" is a very convenient phrase; and I wish for the sake of variety it might replace the eternal "more or less" of the cultured classes. Any sense you like except the crude realism of an independent and isolated existence. And my point is that Plato by making οὐσία a product of ταὐτὸν and θάτερον—Identity and Difference—does refuse such existence to the Idea in its isolation. So far, if I rightly understand them, I am in agreement with Mr. Archer Hind and Dr. Jackson, whom I suppose Mr. Taylor would not accuse of writing hastily or of ignoring decisive passages. The chief difference between my interpretation and theirs is that they take the world-soul in a purely spiritual sense, while I take it in a semi-materialistic or dynamic sense.

Mr. Taylor seems rather displeased with me for not referring to his former articles on the *Parmenides*. As well as I can remember I read them twice through, but, doubtless owing to my own stupidity, they seemed to me considerably more obscure than the dialogue they were supposed to elucidate. And his new paper leaves me in the same bewildered state. But I cannot avoid an

impression that there must be something wrong about a method which explains Plato by conceptions so entirely outside his ken as equations to curves. And this impression is strengthened when I think of Mr. Taylor's marvellous commentary on Zeno's argument about the ὅμοια καὶ ἀνόμοια. How sober poor Maguire seems in comparison! Since Molière's time were ever so many things got out of two words! The proverbial relationship between mice and mountains seems in this instance to be reversed. Mr. Taylor would have been an excellent pupil for Cratylus, the Heracleitean who lectured in dumb show. He would have extracted far more from the movements of that sage's fingers than ever Puff got out of Lord Burleigh's shake of the head.

ALFRED W. BENN.

V.—CRITICAL NOTICES.

Völkerpsychologie. Eine Untersuchung der Entwicklungsgesetze von Sprache, Mythus und Sitte. Von WILHELM WUNDT. Erster Band: *Die Sprache.*

ASSUREDLY the theme of this first volume of Prof. Wundt's monumental work is profoundly interesting. We commenced the study of it with a very real enthusiasm. Here at last was a systematic treatment of linguistic material from the psychological point of view. Here we should find a vast array of facts, countless and diverse, culled from all possible sources, compared with one another, articulated upon the continuous thread of psycho-genetic explanation. Instead of mere *disjecta membra*, viewed from the outside, instead of the empirical classifications of the comparative philologist, we should have exhibited to us the internal mechanism, the causal connexions; linguistic forms would be shown to be the results of mental process; a new insight into mental process would be gained from the comprehensive study of linguistic forms. Nothing less, we imagined, could satisfy the psychologist bent on giving a systematic account of the evolution of language than a survey of all possible means of expression, including the language of signs. And since the evidence for psycho-genetic theory is largely to be found in comparative philology, the marshalling of linguistic facts should go hand in hand with theoretical exposition. We expected that Prof. Wundt's work would be, in a very real sense, at once a philological treatise for psychologists, and a psychological treatise for students of linguistics. Such a book would be the labour of a life-time. Wundt's work is but an incident in one of the busiest learned careers on record. There is far too much theory, and too little fact to please us. The facts are quoted merely as illustrations of theories, not as proofs of them, and no one but a competent philologist could judge whether the illustrations are fairly chosen or not. The same instances from the same languages are apt to recur wearisomely often. The references to primitive languages are much too scanty and vague. For the partial disappointment we are bound to confess to, we may be to blame. We may have pitched our expectations too high; and assuredly an author has a

right to his own conception of the scope of his task. But Prof. Wundt offers little encouragement to his readers. It is a thorny path that leads to his inner shrine, and would-be disciples tread it with bleeding feet. Nearly 1,300 pages of pale German ink on the most exasperating German glazed paper—the physical discomfort of reading them might easily damp the most ardent enthusiasm!

So far as it goes, the first part of this volume is in many ways admirable. It maps out the development of means of expression from the natural expression of the emotions, through gesture-language, up to articulate speech; and thanks to the insight gained into the processes involved in the most primitive methods of expression, Wundt is able to offer most suggestive hypotheses on many interesting problems of the evolution of spoken sounds and the formation of words. The general account of the expression of the emotions is full and good. In view of recent sphygmographic and plethysmographic work in Germany and in America it would certainly appear that his treatment of the vasomotor intensity-symptoms is much too simple and definite. The Chapter on gesture-language, in which he examines one after another the sign-systems of the deaf-mutes, whether natural or artificial, the gestures of savages, of Cistercian monks, and of European peoples —such as the Neapolitans, is of the highest interest. Prof. Wundt is at his best as an expositor; and this chapter is a model of exposition. He divides gestures into two fundamental classes: indicative (*hinweisen*) and representative (*darstellen*) which latter species includes three classes: the imitative (*nachbilden*) the significant (*mitbezeichnen*) and the symbolic. The first are a plastic representation of the whole object or of some striking feature of the object, the second designate the object by means of some one of its qualities or marks, the third are either direct or indirect symbols of ideas. All these kinds of gestures are admirably exhibited as steps in a progressive development. There is nothing to add to Prof. Wundt's classification, and it may be looked upon as final. The sections on the change of meaning of gestures are also full of suggestiveness. But the section on the Syntax of gesture-language, reliable and accurate as it is, cannot be said to add anything to Dr. Tylor's account in his *Early History of Mankind*. Most unhappily, that same practical interest to which, as Wundt remarks, we have in the past been indebted for all we know of deaf-mute gesture-language, has in the last two decades prevented any addition to the material at our disposal. For the psychologist, at least, the decay of the old system of educating deaf-mutes has had disastrous effects. The natural gesture-language still exists in the home, and in the playground, if not in the class-room, but there is scarce any one willing or competent to observe it. Wundt notes the analogies between deaf-mute gesture syntax, and the syntax of Amerind gesture-language as described by Mallery; shows the development of gesture-language in general out of

emotional pantomime, and connects it with the primitive forms of plastic art, with picture-writing in especial. But although recognising to the full the peculiar interest of gesture-language ("Sie repräsentirt in ihrer Bildung alle Entwicklungsstufen, die das geistige Leben des Menschen überhaupt zurücklegt") he contributes nothing to the solution of any but the most general problem of its syntax, and seldom makes use of it to throw light upon cognate problems of the syntax of speech. It would surely have been interesting to compare the structure of Amerind speech with Amerind gesture, or the structure of deaf-mute gesture language with that of primitive savage tongues. The additional insight into the mental processes involved would assuredly have been worth even a good deal of extra trouble.

Chapter iii. deals with vocal sounds, from the animal's cry of pain —or rage, which is an automatic expression of emotion, devoid, in the first instance, at least, of any objective significance—through the songs of birds to the articulate and purposive speech of man. He distinguishes three stages in the development of the child's speech. First come inarticulate cries, next articulate but meaningless sounds, finally articulate sounds which are intended to convey a meaning to other people. Prof. Wundt will not allow that children ever invent their own speech. This view, assuredly widespread among nurses and mothers, and even psychologists, is a result, he believes, of the common illusion "dass der Mensch von Hause aus ein Wesen sei, das in Seinen Handlungen von logischen Reflexionen bestimmt werde". And we fully agree with him that such an intellectualism is barren in principle and wrong in fact. But so to agree is to reject some special theory as to the process of word-invention, not to declare the impossibility of that invention itself. Wundt quotes several instances of such alleged word-invention from Taine, Sully, Darwin, Miss Moore, and he thinks they can all be explained by direct imitation of already existent words. This point obviously admits of discussion, and can only be settled by the examination, not of half a dozen instances, but of a large mass of facts. *A priori*, there seems no reason why the only sounds imitable by the child should be the sounds of the human voice. Whether or not onomatopœia does occur in the early months of life is a question which still awaits solution, and it is assuredly worth careful study. As for the alleged invention not of single words but of a whole language, Wundt is even more sceptical. These tales "sind wohl ein für allemal in das Gebiet der Fabel zu verweisen". He sums up his general view in a pithy sentence: "The child's speech is a creation of his environment, in which he is but a passive co-labourer" (p. 296). Passing now to the natural sounds of developed language, Wundt divides them into primary and secondary interjections, both of them direct emotional expressions devoid of grammatical form; he shows the connexion between secondary interjections (such as *me hercle! Good heavens!* etc.)

and the Vocative, and Imperative; between primary interjections (such as *ah! weh! heu!*) and certain verbs (as *to howl*) or nouns (as *father* and *mother:* he follows Buschmann in rejecting the theory that these words are formed from conceptual roots). He next passes in review the instances of imitative sounds in developed speech. They fall into two main classes: words that bear an immediate resemblance to objective sounds (*cuckoo*, to *tick*), and words that bear an auditory resemblance to some visible or tangible object. German is particularly wealthy in such instances; but surely German is not the only language able to throw light upon a process which Wundt regards as one of the most primitive in the building-up of speech. Surely this is a case in which we have a right to insist upon a much wider survey of linguistic material than a mere parcel of facts from a highly developed tongue! Wundt insists upon the continuity of the evolution of language (p. 314 *et passim*). Well and good, yet it is but one more reason for a comprehensive study of languages belonging to all possible stages of development. He rejects the root-theory of word-formation, and considers roots to be mere grammatical abstractions; that is a question no argument about which is anything but waste of breath, unless it be supported by corroborative evidence. This evidence may be familiar to the philologist, but it is not to the student of psychology, and Wundt makes no serious attempt to enlighten us. Again in discussing the second class of imitative sounds—that of imitation of some non-auditory object by means of an articulated sound—it would have been most instructive to study not merely the traditional expressions of literary speech, but that large mass of new formations, the slang of the populace; for here we have indeed speech in the making. Of all this material, Wundt uses not a scrap. What now is the exact nature of the similarity between word and object in this second class of imitative sounds? By what process do they come into existence? He answers that it is not in the sound itself, but in the movements of articulation upon which its production depends, that we must look for the essential factor. "Die Beziehung zwischen Laut und Bewegung kann keine im voraus gewollte, sondern nur eine nachträglich entstandene sein. . . . Unmittelbar sind es nicht die Laute, sondern die Lautbewegungen, die durch den äusseren Eindruck triebartig ausgelöst werden" (p. 321). In short, these movements of articulation are to be regarded as belonging to the class of imitative gestures (*nachbildende geberde*). And he even asserts (p. 323) that the source of the apparent similarity between words such as *bummeln*, *torkeln*, *kribbeln*, and the actions they denote, is not the sound, but the movement of the tongue and the lips. Surely this is a most paradoxical theory. Is our perception of the movements of articulation in and for themselves so very fine as Wundt supposes? So far as my own introspection goes, this is not true. Muscular sensation and auditory image seem, in my own case, to

be indissolubly combined,[1] and the former has no meaning apart from the latter. And when we remember how very defective is the articulation of the totally deaf, we feel inclined to assume that this connexion is universal. He assumes too that all these processes take place beneath the level of free ideas. This again is an extremely doubtful point. Moreover, had he borne in mind a number of other instances—*e.g.*, modern slang words—which he does not quote, I doubt whether he could have maintained for a moment that the theory proposed was of universal validity. Nor does it really apply to a certain group of words which he discusses under the same head. Thus (p. 324) " Organs or actions which are connected with the production of vocal sounds, are often designated by means of words, in the articulation of which these organs or actions play a part ". Examples: *Zunge, schliesfen, blasen, Mund*, etc. . . . To bring these cases under the concept of true indicative gestures is a really brilliant inspiration. Yet it seems clear that between such words and onomatopœia—direct or indirect—there is all the difference which separates indicative from representative gestures. Wundt's treatment of natural sound-metaphors is also very suggestive.

Chapter iv. discusses the laws of sound-change, in great detail, first continuous, then discontinuous change; and examines the various explanations that have been offered of Grimm's Law. We have space only to note the general features of his treatment. He will not compromise with intellectualism in any shape or form, and denounces the teleological and æsthetic explanations as unpsychological to the core. The main principle of his own psychophysical interpretation is that in the variations of the rate of speech a *vera causa* of sound-change is to be found. He contends that the development of civilisation has been accompanied by a regular increase in this rate. He admits indeed that we can have no direct proof of this proposition, but so far at least as the Indo-Germanic languages are concerned, there are several indirect proofs: *e.g.*, the lessening of the length and cumbrousness of the written sentence, the simplification of grammatical forms, and—the analogy is instructive—the increasing rapidity of musical tempo from say Scarlatti, or Mozart, to Beethoven and Brahms. Let an aspirata be pronounced faster and faster, and it tends to become a media; similarly a media to become a tenuis. This inauguration of an 'experimental' philology is assuredly interesting in the highest degree. It deserves, and it has already received, the attention of linguistic specialists. But, accepting Wundt's assumption that the rate of speech tends to increase as man advances in civilisation, how can the hypothesis explain at once

[1] It is strange that he should overlook at this point a connexion which he fully recognises farther on. On p. 385 he speaks of the " unmittelban Verbindung der gehörten Sprachlaute mit den Articulationsempfindungen ".

the change from aspirata to media and tenuis, and the opposite and simultaneous change from tenuis to aspirata? For such is the substance of Grimm's law (as Wundt himself, indeed, has noted p. 410). Moreover, it is not at all certain that Wundt's assumption is correct. Do savages talk less rapidly than civilised men? Wundt, of course, is ready to admit the lack of any satisfactory evidence. But merely to ask the question is to realise its ambiguity. Is it the emotionally excited or the comparatively calm savage we are speaking of? The rate of speech certainly varies with the speaker's emotional states. On the other hand, the rate with which ideas follow one another does not seem necessarily to vary in direct proportion to the degree of culture. Wundt believes that it does (p. 420). Yet he makes no attempt to justify his belief by making an exhaustive analysis of the factors upon which the rate of speech depends. Practice is the only definite one mentioned by him. But it is clear that there are many others —the development of abstract ideas, the increasing complexity of meaning, the possible changes in emotional excitability, etc., etc.— which may not all tend to produce the same results. Wundt explains in the same way the mutual influence upon one another of two sounds in more or less close contact. (Regressive and progressive sound-induction.) A section upon Assimilation—the influence through association of one word upon another, closes the chapter.

Chapter v. deals with the formation of words, naturally from the psycho-physical point of view. The physiological mechanism is discussed, so too the pathological disturbances of the function of speech, aphasia, paraphasia and amnesia; there is a section on the shortcomings of the cerebral localisation theory; and the chapter includes a small treatise on the psycho-physiology of reading, on the apprehension of the spoken and written sentence. Erdmann and Dodge are hardly treated with the respect to which their careful labours are entitled, and there is nothing noteworthy in the treatment of the psychology of meaning, but the account is a useful *résumé* of the experimental work hitherto published. All this, however, belongs to the province not so much of social as of general psychology; and so it is, indeed, with the rest of this chapter, and practically the whole of the book. But for an occasional reference to imitation or tradition, we are told wonderfully little of the social factor. As a consequence of his psychological analysis of the nature of the word, Wundt finally rejects the 'realistic' theory of roots, and allows them only a conceptual validity. They are what remains when philological analysis has separated the word into its ground and its connective elements. "In the beginning was the word": "Die Annahme einer Wurzelperiode der Sprache it ein Phantasiegebilde" (p. 559). Neologisms are next examined, and some interesting points are made with regard to such groups of words as *e.g. baumeln, bammeln, bimmeln, bummeln*, of which each seems to be derived from the previous one by a process of partial onomatopœia (p.

571). After this come word-formations through sound-reduplication, and through synthesis. Our complaint is once more of the small number of examples given. They are practically all taken from Indo-European languages, and more especially from modern German.

We have too little space left for more than the vaguest indication of the contents of the second half volume. It is divided into four chapters, the first of which treats of the different kinds of words—substantive, adjective, verb, pronoun, etc.—and their various forms (number, gender, case). The second deals with the interconnexion of words in the Sentence. The third is on the alteration of meaning of words and idioms,—and is a contribution to what Dr. Postgate would call Rhematology, and what Prof. Bréal writes about under the name of Semantics. The fourth chapter discusses the origin of Speech, and the main types of theories that have been devised to account for it. Wundt's own theory is evolutional, and postulates the continuity of evolution. It is eclectic, and borrows from the previous theories (those of interjectional, imitative, and fortuitous vocal sounds) the undoubted facts which they erred only in selecting as the exclusive basis for a doctrine of origin. To ask whether speech or reason came first is, for Wundt, as absurd a question as that famous conundrum about the hen and the egg.

F. N. HALES.

The Varieties of Religious Experience: a Study in Human Nature. Being the Gifford Lecture on Natural Religion Delivered at Edinburgh in 1901-1902. By WILLIAM JAMES, LL.D., etc., Corresponding Member of the Institute of France and of the Royal Prussian Academy of Sciences, Professor of Philosophy at Harvard University. Longmans, Green & Co., London, New York and Bombay, 1902.

THIS is not an easy work to review. The greater part of it is taken up with records of actual religious experience, mostly of abnormal kinds—remarkable cases of conversion, of exceptional saintliness, of religious exaltation and mystic insight. That the book is one of the highest interest, that extraordinary industry and research have been employed in collecting these records from the religious literature of all ages and faiths, that Prof. James's comments upon them are characterised by all his accustomed charm of style, vivacity and open-mindedness, is unquestionable. Nor can there be any doubt that it was well worth while to undertake such a task. They will at least be valuable as materials for Psychology and Philosophy, whatever may be thought of the use which Prof. James himself makes of them. It is good that philosophers should be reminded that there are sides of human nature

and human experience which are too often undreamed of in the formal philosophy of the schools. It is well that the theologian should be compelled to recognise how ideas and experiences which he is in the habit of supposing to be peculiar to his own religion and perhaps to his own form of that religion are really, not indeed without characteristic differences and modifications but still to a large extent, common to many widely different faiths. But here we are obliged to ask what is the value of Prof. James's book, not merely as an interesting piece of literature, or even as a piece of psychological research, but as an actual contribution to Philosophy and particularly to the Philosophy of Religion.

I shall best perhaps answer this question by confining my detailed criticism to the chapter entitled "Conclusions". My space will not allow of much argument in favour of or against Prof. James's views. Prof. James would, I am sure, be the last man in the world to complain if the review on so personal a book should be somewhat personal also—a mere statement of personal impressions and appreciations rather than an elaborate discussion. I pass over the merely psychological part of Prof. James's conclusions—his mere summary of the leading characteristics of religious experience and his estimate of its partial utility and of the limitations of that utility. Against the fairness and general healthy-mindedness of his summing-up I have nothing to say. The only remark that seems called for is this—that Prof. James deals almost exclusively with abnormal and exceptional experiences. His own defence of this procedure is that the exceptional or extreme cases show more clearly than others what is the general character of the normal or ordinary cases. If the object be to test the existence of some specific faculty of spiritual insight, distinguishable from the ordinary operations of the reason, understanding, or moral consciousness, there may be much to be said for such a course. But when the question is as to the value of religion in life, its advantages are more questionable. Prof. James is quite alive to the defects of these abnormal types of character—the social uselessness and even perniciousness for instance of the more ascetic lives which he records. He fails to consider how far this is due to the very exaggeration or isolation of the qualities or tendencies in question. There is too little attempt to distinguish from an ethical or religious point of view between different kinds and varieties of the religious consciousness, though the feelings of most readers in the perusal of these "human documents" will probably range from the highest admiration and sympathy to a loathing and disgust relieved only by pity. He is right in demurring to the typical "alienist's" attempt to minimise the significance of all such experiences by a free use of such terms as "morbid" or "neurotic"; but we may surely be allowed to protest also against a study of religion in which the sole interest of the inquirer in his subject seems to lie in their abnormal character. To take a concrete case, St. Paul was "caught up into the

seventh heaven" and saw visions. Herein lies apparently for Prof. James the main interest of his "case". He is quite justified in treating St. Paul from this point of view as one of a numerous class of religious enthusiasts, and yet in pleading that that fact does not necessarily prevent our regarding those visions of St. Paul as sources of real "revelation" for the world. But he hardly seems to contemplate the possibility of a point of view from which the highest religious importance and significance of St. Paul may be held to lie, not in the fact that he saw visions, but in the fact that he was so very unlike the majority of persons who at various periods of the world's history have seen visions. Those visions, however we explain them, were no doubt, at that time and place, a condition of St. Paul's exceptional religious influence, and yet St. Paul the thinker, the spiritualiser of Jewish Theology and the rationaliser of Jewish Ethics, may be much more important than St. Paul the ecstatic visionary. Without denying the religious value of the vision which formed the turning-point in St. Paul's life, the most remarkable thing about St. Paul was not so much that he spake with tongues more than his converts, but that (unlike them) he attributed comparatively little importance to them in comparison with the higher and more rational gift of "prophecy". Prof. James's preoccupation with the marvellous and the abnormal almost inevitably conducts him to, if indeed it is not inspired by, a determination to find the essence of religion in feeling and emotion, and to belittle its rational or intellectual side.

But it is with Prof. James's metaphysical or philosophical conclusions that we are chiefly concerned here. He puts to himself the following questions:—

"First, is there, under all the discrepancies of the creeds, a common nucleus to which they bear their testimony unanimously?

"And, second, ought we to consider the testimony true?

"I will take up the first question first, and answer it in the affirmative. The warring gods and formulas of the various religions do indeed cancel each other, but there is a certain uniform deliverance in which religions all appear to meet. It of two parts:—

"1. An uneasiness; and

"2. Its solution.

"1. The uneasiness, reduced to its simplest terms, is a sense that there is *something wrong about us* as we naturally stand.

"2. The solution is a sense that *we are saved from the wrongness* by making proper connexion with the higher powers."

. . . . . .

"The individual, so far as he suffers from his wrongness and criticises it, is to that extent consciously beyond it, and in at least possible touch with something higher, if anything higher exist. Along with the wrong part there is thus a better point of view, even though it may be but a most helpless germ. With which part he should identify his real being is by no means obvious at this stage;

but when stage 2 (the stage of solution or salvation) arrives, the man identifies his real being with the germinal higher part of himself; and does so in the following way. He becomes conscious that this higher part is conterminous and continuous with a MORE of the same quality, which is operative in the universe outside of him, and which he can keep in working touch with, and in a fashion get on board of and save himself when all his lower being has gone to pieces in the wreck" (pp. 567-568).

I am quite willing to accept the positive side of Prof. James's contention—that these abnormal experiences do carry with them some probable evidence in favour of the reality of a spiritual world beyond the experiences themselves—in other words they do supply some evidence, to put the matter in a more definite and theological way than Prof. James himself would do, in favour of the existence of a God who is a moral being and of a future for the individual soul continuous with its present life, though I find it difficult to estimate the exact degree of weight which ought to be given to such experiences when taken in isolation from other arguments the validity of which would probably not be admitted by Prof. James. But Prof. James is not content with claiming consideration for the line of thought with which his book is occupied. He is prepared apparently to base religion entirely upon the evidence afforded by these abnormal experiences to the few who have gone through them. The rest of us must apparently depend entirely upon the external testimony of those who have experienced such things. Of all other arguments or metaphysical considerations Prof. James speaks with jaunty and light-hearted contempt. And no wonder: for his own metaphysical position, it would seem, is practically Hume's. It is clear that it would be useless for a reviewer who believes that Sensationalism was refuted once for all by Plato in the *Theætetus* to enter into closer argument with a writer holding such a position—especially as neither old arguments nor new ones are adduced in support of his conclusion. Prof. James appears to rely exclusively upon that old topic of the Philistines, the disagreements of the Philosophers. "I need not discredit Philosophy by laborious criticism of its arguments. It will suffice if I show that as a matter of history it fails to prove its pretension to be 'objectively' convincing. In fact, philosophy does not so fail. It does not banish differences; it founds schools and sects just as feeling does (p. 436)." But do not Science and Politics found schools and sects, and is Prof. James prepared to hand over Science and Politics to the undisputed sway of subjective caprice or emotion, because there is not as yet a complete consensus as to the truth of Weismannism or the advantages of Democracy? There is one faith which all sects in Philosophy at all events have in common, except the sect to which Prof. James belongs, and that is faith in the validity of Reason, in the existence of truth and the duty of pursuing it. There is a faith which all religions as well as all philosophies have in common and that

is the faith if a thing is really true, it must be true for you as well as for me. And that is just the truth which Prof. James categorically denies. I am not of course questioning the value or the partial and relative truth of many conflicting creeds, but they have their value just on one condition—that those who profess them really do believe them to be objectively true. They need not of course believe that they are infallible. We make mistakes in arithmetic, but we believe that *if* my answer to a problem in arithmetic be true, yours which differs from it cannot be true also. "To believe" means to think that a thing is objectively true. This is just the faith which Prof. James does his best to dethrone by inviting every one to believe just what caprice dictates. "The gods we stand by are the gods we need and can use, the gods whose demands on us are reinforcements of our demands on ourselves and on one another" (p. 331). All the Philosophies or Religions which believe in objective truth, no matter what their disagreements in other matters, have more in common with each other than they have with Prof. James's revived Pyrrhonism. Prof. James's position can only be described as a deliberate abandonment of the search for truth and a handing over of Religion and Morality (and why not Science?) to the sway of wilful caprice. To me at least to believe that my Religion or Philosophy was only true for me would be exactly the same thing as not believing it at all. Of course Prof. James is not consistent—no sceptic ever is. "In our Father's house are many mansions, and each of us must discover for himself the kind of religion and the amount of saintship which best comports with what he believes to be his powers and feels to be his truest mission and vocation" (p. 377). Beautifully put, but then this implies that there is an objective canon which makes one mission and vocation "truer" than another; it may be different in detail but the ideal by which its value is measured must be one and the same. I gladly recognise that my creed and the discrepant creed of my neighbour may both of them really be but approximations to or partial aspects of *the* truth, but to believe that both may be *equally* true is equivalent to not believing either to be true at all.

Prof. James's book is eminently one which "gives to think". As such it has a high value, intellectual and practical, and particular suggestions and ideas of it—for instance, its emphasis on the importance of the "subconscious self," to whose working the author attributes many of the religious phenomena which he studies—may contribute to the building up of a sober and rational philosophy of religion in the future. The candour and breezy optimism of his tone are attractive and stimulating. But to those who do not agree with it, its philosophy will seem (as a whole) flimsy and superficial. To such minds Prof. James's profound disbelief in Reason will suggest something more than a doubt whether in its real tendency the book is as edifying and religious as it evidently is in the intention of its author.

Prof. James insists much upon the fact that for the fortunate

few who have undergone these immediate religious experiences they carry their own authority with them, and that therefore all inquiries into their objective validity are useless. That may be the case so long as reflective thought is excluded. But how often does it not happen that to those who have had, or thought they had, this immediate religious insight subsequent intellectual emancipation has brought doubt and disquietude? The very point that they doubt is whether their own emotions, intuitions, even visions were anything but the outcome of subjective wishes or a disordered brain. The world cannot be sharply divided, as Prof. James's wants to divide it, into those who possess immediate and self-sufficing insight and those who have had no religious experience at all. There are thousands who will not and cannot trust whatever faculty of moral or spiritual insight they possess unless they are presented with a creed which satisfies their Reason. To be told to believe whatever they wish to believe only plunges them into a deeper scepticism. Such minds can only find the satisfaction that they require in a very different philosophy from that which underlies Prof. James's book.

H. RASHDALL.

Studies in the Cartesian Philosophy. By NORMAN SMITH, M.A., Lecturer at Queen Margaret College, and Assistant to the Professor of Logic in the University of Glasgow. London: Macmillan & Co., Limited. New York: The Macmillan Company, 1902. Pp. 276. Price 5s. net.

THIS book should prove a real boon to the advanced philosophical student. Mr. Smith has most ably and effectively singled out the guiding ideas and assumptions of Descartes' metaphysics, and from their picturesque genesis in Augustine's writings—the philosopher and the saint are not confused by Mr. Smith—has traced their development through Spinoza, Leibniz, Locke and Hume to the *Critique of Pure Reason*. It is the story of the Cartesian assumptions sketched with singular freshness and respect for facts in a clean, terse style, the one very pardonable defect of which is perhaps an over-readiness to sacrifice ludicity of exposition to thoroughness of treatment. The reader's indulgence towards footnotes is somewhat overtaxed (many of them might with advantage have been promoted to the text), but, as though to offset the element of distraction thereby introduced there is a short but exceedingly serviceable index.

The opening chapter deals with 'the Problem of Descartes,' the dualism between Self and Nature, which was involved in the general thought of Descartes' day and was the product partly of the individualistic tendencies of Christian Philosophy and partly of the then awakening conception of a despiritualised Nature.

This dualism Descartes seems to have accepted as self-evident, and as equally self-evident the theory of representative perception which is logically deducible from it. His assigning the *cogito ergo sum* as the ultimate element in his system would therefore be due to his overlooking the two more fundamental presuppositions on account of their self-evidence. Our author indeed insists that if we are to avoid an utter misrepresentation of the facts we must note that, so far as the internal dialectic of Descartes' thought is concerned the dualistic theory is the most fundamental basis of the Cartesian system, the theory of representative perception being a mere deduction from it, and the *cogito ergo sum*, a mere logical deduction from the theory of representative perception.

Though much stress is laid on the logical order here indicated, the evidence adduced in its support is not convincing (*cf.* p. 116 and note, and p. 249 and note). Moreover the analogy of Augustine's internal dialectic (*cf.* p. 6) distinctly points another way. Readers of *Scottish Philosophy* are further aware that it is at least as easy to deduce the theory of representative perception from the *cogito* as it is to deduce the *cogito* from the theory of representative perception.

The treatment of Descartes' Method in chapter ii. is excellent. It is shown that Descartes' insistence on Method is due to the fact that, as he interprets it, it expresses the innermost essence of mind and so that the problem of method is identical with the problem as to the nature and limits of knowledge. Descartes' Method is the intuitive-deductive method of mathematics. Intuition, which is 'not a fitting together of premisses but a dialectic,' 'a growing capacity of the mind for truth,' is the source of all our knowledge. Deduction is 'simply the process by which intuition extends itself so as to take in the complex, that at first appears to lie outside its sphere'. It is knowledge in the making. The *limits* of knowledge lie on the one side in the simple natures from which Intuition starts, on the other in the "possible fruitfulness" of these and in their "adequacy to the comprehension of the real".

In the criterion of truth which Descartes utilises in the employment of his Method we have the first clear evidence of that *rationalism* which is one of the characteristic features of Cartesianism. Misled by the scholastic doctrine of essence, he interpreted his criterion as meaning not only "that all that in thought is clearly and distinctly conceived to be necessarily connected must be likewise inseparable in existence," but that "in the case of ideas between which the mind can perceive no connexion, the existences corresponding to them must also be unconnected".

Now as the simple natures with which Descartes starts are one and all abstract general conceptions we are led by this criterion to see the mirror of real existence in the rational, ordered concatenation of general conceptions. Nature reveals herself adequately and transparently in the rational framework of mechanical science.

This rationalism, then, which, by its elimination of the accidental as unreal, becomes also a conceptual atomism, involves by its elimination of contingency from reality a view of nature so abstract that no room is left for change and the operation of physical causes, so that causation is necessarily identified with explanation. Our author proceeds to show that whether we insist on the abstract conceptualism of Descartes' scheme or on its atomism we are either way inevitably led to a thorough-going Occasionalism. One of the most instructive features in these studies is the way in which our author shows how the imperfections of Descartes' rationalism, not only in his own writings but in that of his followers, are shown up at every turn by the logical necessity of resorting to an illogical *deus ex machinâ*, the occasionalistic solution being "the attempt to introduce in an external form that necessary relation to the infinite which ought to have been kept in view from the start". To construct a philosophy on an abstract basis, whether on rationalistic or empiricist lines, is simply to court the necessity of occasionalistic theory. Thus Dr. Ward's criticism of Spencer's philosophy in his Gifford Lectures amounts to a censure of Spencer's Occasionalism. We infer, indeed, from our author's treatment that the only way of avoiding Occasionalism in the development of a philosophical theory is to start, without making any assumptions, from an analysis of actual experience. This is the final conclusion of the book as reached in the chapter dealing with the transition to Kant, and, in its general form, seems to be one of those truths which philosophers might well be induced to accept as a common basis for further discussion; the conflict might then be suitably concentrated on the meaning to be attached to experience.

Occasionalism means further the introduction of an unauthorised Spiritualism into philosophical doctrine and into the Cartesian doctrine in particular. 'Spirit,' we read, 'is in the system of Leibniz, as in that of Descartes, the *deus ex machinâ* that solves all the irresolvable difficulties caused by a rationalism that is based on the scholastic doctrine of essence. Hence we are not surprised to find further on that "with Hume's destruction of the occult self, the occasionalist system of Descartes collapses like a house of cards".

The fortunes of the doctrine of representative perception through all the line of thinkers between Descartes and Kant are fully discussed by our author. Indeed the greater portion of the volume is devoted to following up the history of Descartes' three fundamental tenets, his theory of representative perception, his rationalism and his spiritualism, to their final collapse under Hume and Kant. In Spinoza it is Descartes' rationalism which is the main undermining influence, compelling Spinoza to identify causation with explanation, to evolve an empty pantheism—the counterpart of the Cartesian atomism—and so to negative a strong tendency of his to view reality concretely, a tendency not sufficiently recognised by Spinoza's critics. In Leibniz, Descartes' rationalism, through the doctrine of essences on which it is based, affords the mainstay

of his monadism. The influence of Descartes' rationalism over Locke is especially felt in the Fourth Book of the Essay. "For Locke, as for Descartes, mathematical reasoning, falsely interpreted, remains the ideal of knowledge. Empirical knowledge when compared with this ideal is condemned in every respect." Our author, indeed, gives excellent grounds for justifying one in regarding Locke as essentially a rationalist, his sensationalism being "but externally tagged on to his rationalism". This is good criticism, but it seems a remarkable oversight that in this connexion Bacon's influence over Locke should not have been taken into account. Bacon's own empiricism is weighted with a theory of forms which, like Descartes' theory of abstract conceptions, is rooted in the scholastic theory of essence, itself a product of Greek thought, and it would be more just to attribute to this hoary prejudice, which is *par excellence* the butt of modern Idealism, the responsibility for atomic rationalism wherever it appears as a philosophy, whether in Bacon or Descartes, Leibniz or Locke, than to press the central responsibility back upon Descartes.

The excising of the spiritualism and rationalism from the Cartesian system, together with the Occasionalism they involved,—an Occasionalism which reached its climax in Berkeley's spiritualistic system, is shown to be due to Hume. Hume is, however, only a half-emancipated Cartesian, though he is working towards Kant's position. He is still under the spell of the doctrine of representative perception, holding the Cartesian view 'that the function of knowledge is to reduplicate an independent reality'. At the same time his logical position, like that of Kant, is rather phenomenalism than subjective idealism. He is logically committed, not to the contention 'that we know nothing but purely subjective states,' but rather to the view 'that nothing subjective as distinguished from objective is conceivable by us'.

The transition to Kant by which the Cartesian assumptions are transcended is peculiarly well treated. The theory of representative perception falls before the Copernican idea that as cognition cannot be made to conform to objects, it may well be that objects conform to our ways of knowing; and in the Objective Deduction of the Categories this revolutionary thought is tempered by what amounts to the admission that it is as true to assert that nature makes the Self possible as that the understanding creates Nature.

As regards Kant's method the refreshing confession is made that "the outlandish title of 'transcendental' need not conceal from us that it is simply the hypothetical method of physical science applied in the explanation of knowledge," and the conclusion is drawn that, starting as Kant does with experience (and indeed not with experience as a whole, but with the simplest act of knowledge, *viz.*, Consciousness of Time), Kant is alone the truly empirical philosopher, Hume's method being by contrast *a priori* and dogmatic. We are thus introduced by Kant to the true concrete, experimental point of view whence 'Modern Philosophy makes a fresh start'.

Such is the gist of these Studies in the Cartesian Philosophy. Though essentially a student's book, closely reasoned and in fresh contact with the original sources, it is full of suggestion even to the mere reader. Mr. Norman Smith has the insight and expressive force of an original thinker and to the many who love to see old problems freshly handled the book cannot be too cordially recommended. They will find these studies striking to the point of vividness and eminently suggestive.

W. R. Boyce Gibson.

VI.—NEW BOOKS.

Modern Spiritualism: A History and a Criticism. By Frank Podmore. London: Methuen & Co., 1902. 2 vols. Vol. i., pp. xviii., 307; vol. ii., pp. xii., 374.

Mr. Podmore's book has, on the whole, met with so favourable a reception in the daily and weekly press that it would be superfluous now to insist upon its very real merits. His style is easy, flowing, agreeable to a fault. His competence is undoubted. Few sources of information can have escaped his diligent search. He has brought together a mass of material which will be indispensable to all future students of the subject; and if we are led to complain of what he has left undone, it is assuredly not from any want of gratefulness for what he has given us.

The author's object is explained by his title. On the one hand he has to narrate the growth of Spiritualism as a religious system, to trace its descent from pre-existent beliefs, to explain the conditions which favoured its success. On the other hand, he seeks to determine how far the belief was justified. This he does, now by criticising accounts of the alleged phenomena upon which the belief was based, and setting forth their evidential shortcomings, now by pointing out the analogies between some of the phenomena of the mediumistic trance and such well-known features of hypnosis as automatisms, hyperæsthesia, impersonation—or more debatable phenomena such as telæsthesia and telepathy. In the earlier part of the book criticism goes hand in hand with narrative; but the latter part is exclusively devoted to criticism. Hence a certain lack of continuity in the exposition, a want of symmetry in the plan. Book iv., on the Problems of Mediumship, is not so much a sequel to the previous books as a separate work, written from a different point of view. Certain typical mediums are chosen—Eusapia Palladino, D. D. Home, Stainton Moses, Mrs. Piper—the evidence as to whose phenomena is specially copious, detailed, or precise, and a critical attempt is made to appraise the value of the evidence. Book iv. is really a treatise on psychical research, and he fails to make clear the relation between a scientific investigation into the alleged facts and the system of belief connected with them. This treatment is a natural result of what is in our view the chief defect of Mr. Podmore's book. He has nowhere troubled to define the psychological nature of the spiritualistic faith. To explain adequately the rise and growth of a religious belief it is of course needful to analyse the nature, first of belief in general, then of religious belief, and of the special religious belief in question. Two problems are to be distinguished: one of general, the other of social psychology; and the former is anterior to the latter. Mr. Podmore does indeed undertake to explain how Spiritualism spread and prospered. But just because he does not tackle the anterior problem, he

must fail to solve the other with any completeness. Nor is the cause of his failure far to seek. His attitude is too little that of the psychologist, less interested in outward fact than in mental process; too much that of the ordinary man, concerned rather to explain away than really to explain. For him a delusion is a delusion, and it is nothing more. He sees it from the outside only. It is an inevitable consequence of this attitude that for him the history of Spiritualism practically resolves itself into the history of the phenomena alleged to have occurred in the presence of spiritualist mediums. But this is surely an erroneous view. Mr. Podmore himself is never tired of pointing out how the Spiritualist's faith has survived the exposure of countless fraudulent mediums, how it has remained unshaken even while its flimsy edifice of accumulated marvels was crumbling to the ground. The faith may or may not have been really occasioned by the alleged phenomena. At least it is something very different from a rational theory about them. It is a form of Supernaturalism, and it is to be regretted that Mr. Podmore has missed a splendid opportunity of making a solid contribution to the psychology of religion by analysing this belief.

Book i. is called the Pedigree of Spiritualism. But that is a misnomer. It is really a pedigree of the spiritualistic phenomena. There is no continuity between the supernaturalist belief in witchcraft, and modern spiritualism; as Mr. Podmore points out the Sympathetic System and the doctrines of Paracelsus and his followers were essentially scientific, and supernaturalist only by way of exception, as in the case of Valentine Greatrakes. So too the explanations given by the French mesmerists from Mesmer himself down to Pététin and Deleuze, of their patients' convulsions, trances and automatisms round the *baquet*, were one and and all naturalistic in type. The continuity is between the phenomena which gave rise to these different beliefs and theories. In France, Alphonse Cahagnet (1848) seems to have been the first spiritualist of any note. But whether he approached the problem of mediumship as the result of earlier experiences with mesmerism, and what was the connexion between the ordinary magnetic somnambule and Adéle Maginot, we are not told. Indeed Mr. Podmore makes it probable that Cahagnet was not unacquainted with the writings of Swedenborg; and in the sequel he shows how great was Swedenborg's influence upon the development of spiritualism in the United States. It is therefore at least strange that in this 'pedigree of Spiritualism' there should be such scant mention of the Swedish seer's visions. Mr. Podmore must remedy this serious defect in a second edition. In Germany, thanks to the prevalent idealistic interpretation of the laws of nature, mesmerism took quite early a spiritualistic turn. In England, mesmerism, as it was introduced from France, so it followed the French example. The phenomena were explained on the analogy of magnetism and electricity, with an occasional appeal to Reichenbach's odylic force. It is in America that the evolution of the magnetic somnambule into the inspirational medium was consummated, thanks to the trance-utterances of the Poughkeepsie seer, Andrew Jackson Davis. Mr. Podmore shows the connexion between the new forms of religion started by Davis, "Principles of Nature," fostered by the 'Univercælum,' and all manner of novel ideas—social, moral, political—then fermenting in the raw brain of the United States; and he makes good use of this connexion when he essays to account for the "facile acceptance and ready spread of the new marvels" of Spiritualism. He finds the essential conditions in the general character of the *milieu* "in the general diffusion of education combined with an absence of authoritative standards of thought and the want of critical training; in the democratic genius of the American people; in their

liability to be carried away by various humanitarian enthusiasms; in the geographical conditions incident to a rapidly expanding population".

Modern Spiritualism proper began in Arcadia with the mysterious rappings of the Fox girls in December, 1847. Within three years there were few towns of any importance without their rapping mediums. Within seven years the movement had acquired that complex character which it preserved throughout its later development. Spirit-rapping, slate-writing, *apports* of objects, levitation of the human body, materialisations, all these were familiar to the earliest spiritualists, and all these were new. Not so the mediumistic trance, nor the numerous cases of apparent thought-transference or clairvoyance. These had been mesmeric commonplaces for half a century on both continents. But the trance-utterances of A. J. Davis and T. L. Harris excel anything of the kind that had been known before. The illiterate Davis filling "800 closely printed pages" with a whole system of the Philosophy of Nature (his trance-lectures were spread over a period of fifteen months. He was twenty-one when the book was published, and protested that till then he had never read but one book and that an historical romance); the Rev. T. L. Harris dictating in the trance the 3,000 or 4,000 lines of his *Epic of the Starry Heavens* (fourteen consecutive days sufficed for the task)—these are the classic instances of '*automatisme psychologique*' in literature, beside which all the glossolalia of all the religious revivals fades into insignificance. Table-turning invaded England in 1853, but the 'classic period of English Spiritualism' began with the invasion of mediums from America in 1860. In the following decade professional and private mediums (the ineffable Mrs. Guppy chief among the latter) were alternately deceiving the public and exposing one another. At one time or another, the Davenports, the Foxes, Slade, Eglinton, and a crowd of minor impostors, were all convicted of fraud. In many cases, professional conjurers have improved upon the performances of mediums who seem to have been little better than bungling amateurs. The average Spiritualist looked for a sign, and was only too glad of a counterfeit. It mattered nothing to him that the marvel was spurious. It was token for the gold of whose real existence he felt convinced. Nor is the Spiritualist's attitude a new or strange one in the history of religious conviction. Let any one reflect upon the orthodox Christian's view of miracles. Once the spiritualistic belief started somehow, it is easy to understand how it could feed on such poor stuff as fraudulent charlatans had to offer. Given a blind faith, *plus* a very dark room, and expectant attention may well lead a man to recognise the seraphic features of his beloved in an animated broomstick capped with a bit of muslin rag. Illusions, hallucinations, visions of a mind fevered with a rapt expectancy—we can readily admit that the convinced spiritualist will fall an easy prey to them. But are they the sole causes of the belief in the occurrence of the phenomena associated with spiritualist mediums? Mr. Podmore's answer is in the affirmative so far as the so-called physical phenomena are concerned. We agree perfectly with him when he separates these sharply from the so-called 'psychological phenomena' and when he finds himself unable to admit that Mrs. Piper's trance-utterances can be adequately explained on the hypothesis of fraud, or of the normal acquirement of information. But we feel bound to examine critically his attempted explanation of the physical phenomena observed in the presence of D. D. Home. As is well known, the evidence for them (levitation, elongation, materialisation, moving of objects without contact, handling of red-hot coals, etc.), is exceptionally strong. We have no space for anything like an adequate discussion. That would involve a review, not of shreds of

evidence, after the fashion of Mr. Podmore, but of the mass of testimony considered as a whole.

Our author's theory is, in brief, that Home was an accomplished conjurer, and that part of his equipment, and perhaps of every medium's equipment, was the power to cause other people to experience definite hallucinations. Sir Wm. Crookes' theory, based on the results of experiment, was, and is still, that Home's phenomena were not clever pieces of conjuring, but were due to the operation of a peculiar physical force. Mr. Podmore's strictures are of two kinds. On the one hand, some of the effects observed in Home's presence are such as might have been produced by an expert conjurer, and unless we can be certain that all his actions were subjected to continuous observation, the presumption of sleight-of-hand is too strong to be resisted. But it is well known that continuous observation is impossible; and no phenomenon can be above suspicion the testimony for which rests upon the need of continuous observation. With this view we are in emphatic agreement. Sir Wm. Crookes' experiments on Home's alteration of the weight of material objects cannot be held strictly to prove his own conclusion on account of a defect which is at least formal, *i.e.*, the need and the impossibility in these experiments of continuous observation. But to recognise this is not to consider Mr. Podmore's own solution as proved. It is one thing to admit the abstract possibility of fraud; it is another to fly to the conclusion that under the circumstances fraud could be, or was, actually practised. Now Mr. Podmore believes that this was the case. He tries to show how in particular instances the trick might have been, and probably was, done. We venture to say that no serious student of the whole evidence will think his explanations plausible, for the simple reason that whilst they may be acknowledged to fit the special instance chosen. they can not, without doing great violence to the recorded evidence, fit a number of other instances which our author does not quote. Thus when he postulates an invisible thread attached at one end to the hook of the spring-balance, and at the other to Home's feet or knees, he forgets in the first place that the force required to depress the marker through a given number of degrees varies according to the angle at which it is applied. He forgets, again, that the balance was apparently affected, not only when Home was sitting near it with his hands on one end of the board, but when he was sitting at some distance from it, with his hands on the dining-room table, and his feet turned away from the balance, etc. . . . When, again, Mr. Podmore explains how the lath was made to move, by means of an invisible thread passed over the gaselier, it may be conceded that such an arrangement could account for movement in one plane. But he forgets the other instances in which the movement was more complex. The gaselier may have been as handy as he imagines, and the threads may have been as invisible as he would have us believe, but how complicated an arrangement of them would be needed to make the lath float round the table, with upward and downward jerks, until one end settled on Sir Wm. Crookes' hand, answered his questions by means of the usual taps, and even spelled out a long message in the Morse code! Nor can we profess to be convinced by Mr. Podmore's hypothesis of hallucination. Sir Wm. Crookes was not a spiritualist. At or about the date of his séances with Home, he was at work on Thallium and its atomic weight, on Repulsion resulting from Radiation, on the Radiometer, and Radiant matters. Surely it is difficult to conceive his critical genius disarmed and lulled to a credulous slumber by the mere presence of a medium, however charming in manner, and affable in speech. For candour must compel Mr. Podmore to recognise that, so far as the evidence goes, there was little or nothing

of the hypnotist's *mise en scène* in most of Home's performances! What, then, is Mr. Podmore's explanation of the power he finds in Home to impose on other persons hallucinatory experiences? Suggestion—hypnotic and waking—we know, and every one is ready nowadays to see in it a *vera causa*. Thought-transference Mr. Podmore believes in just as firmly. It is admitted that we are ignorant even of the conditions, much more of the limits of operation of either. Mr. Podmore straightway assumes that they have no limits and that they will explain everything. It may be even as he believes. His conviction at least is not that of scientific knowledge. Surely it were better to confess the very real ignorance which he shares with a number of other fairly competent and critical minds.

F. N. Hales.

Philosophy of Conduct. A Treatise of the Facts, Principles and Ideals of Ethics. By George Trumbull Ladd, Professor of Philosophy in Yale University. London: Longmans, Green & Co., 1902. Pp. xxii., 663.

The scope and aim of this voluminous treatise are stated by the author as follows: "To raise, even if it cannot completely answer, the more ultimate problems of conduct as our experience forces them upon the reflective thinking of mankind"; or, stated more fully, "to investigate the nature of man as moral (capable of conduct), to classify and discuss the different forms of his conduct as coming under moral law and constituting the so-called 'duties' and 'virtues,' and to treat speculatively the ultimate ethical conceptions regarded as having their ground in the existing system of the Universe. Such a treatment naturally results in the three following divisions of the one treatise of the Philosophy of Conduct: (1) The Moral Self; (2) The Virtuous Life; (3) The Nature of the Right."

On the other hand, although the treatise is a 'Philosophy,' and Ethics 'one of the Sciences of man,' we must ever remember that "Aristotle's caution applies. It is not fitting, in accordance with the very nature of the subject to expect, or even to seek for, that more perfect accuracy which is demanded of the physical and natural Sciences. Neither in respect of minuteness of detail, nor of mathematical exactness, nor of definiteness, nor of finish, nor of justifiable subtlety of argument shall we expect, or strive, to rival the work of the physicist, the chemist, or even the physiologist or biologist."

This portion of the spirit of Aristotle (to whom reference is made in every chapter) pervades the whole work. Moderation in all things, even in cogency of reasoning, is, throughout, the characteristic note. Hence the critical estimate of the value of this treatise will vary with the temperament of the reader. The 'practical' mind will award it unqualified praise; the scientific temper will incline to rate it much below its true merit. For, indeed, the greater portion is of the nature of a sermon rather than of a science. It is dedicated to "a good man"; its keynote is the "Might of Goodness"; such sciences as psychology, epistemology, and metaphysics are of value only in so far as they are "directed to the rational and practical betterment of the life of conduct"; this betterment is the "end in view" which, in all his investigations, the writer has had; he expects "indifference, if not secret or more open antagonism," to his "efforts to elevate the tone of the prevalent consciousness," from the "relatively low and nerveless ethical condition of the current Christianity"; but in full confidence that moral principles and ideals will

"remain substantially inviolable" he "puts forth this essay in times which" he "is compelled to regard as by no means favourable to its most unprejudiced and practically effective reception".

So long as we are dealing with "The Virtuous Life" this moral earnestness and the religious convictions to which it is due add to, rather than detract from, the value of the teaching. The author's account, historical and descriptive, of the particular virtues, under the convenient old-fashioned division into Virtues of the Will, of the Judgment, of Feeling, is excellent. The analysis is clear, sensible, straightforward; the protest against undue straining of words in the interests of some narrow psychology conveys a useful warning; the occasional epigrams are distinctly to the point, and the author's meaning is brought out by illustrations which show width of reading and shrewdness of observation. But, from a treatise which claims to be a "fundamental discussion of ultimate problems," we have a right to expect more than thoughtful suggestions for the general reader. Clearness of definition of the more important terms, cogency of reasoning from premisses to conclusion, some justification of premisses assumed, are essential to a scientific or philosophic treatment of any subject, and they are all absent from Prof. Ladd's treatise. Rejecting all *a priori* methods the author prefers to "follow the lowlier and more humble but much surer and safer path of psychological and historical inquiry". "This empirical path" (he truthfully adds) "conducts us irresistibly to the presence of the ultimate metaphysical problems." When, however, we examine the inductive process so sketched we find that the problems are already solved to begin with, and the facts which should form our starting-point are looked at through the coloured medium of this solution. These empirical facts are two: "Man is, as a matter of fact, a moral being. Man is also, as an equally sure matter of fact, a religious being." Further examination shows "the practical insufficiency of morality to sustain and elevate its own principles without support and help from religion". "Religion imparts warmth and vitality to morality;" so much so that, "if the postulates of religion which the constitution and history of man seem to warrant him in accepting be made the faith of the Soul and the guide of the practical life, many of the practical antinomies of Ethics are either completely solved, or much relieved". From this it follows that morality must be based upon Religion by identifying the Ground of Morality with the World Ground, and "conceiving of this World Ground as the ideally righteous and holy personal God". This God is the Creator and Sustainer of Reality. Man is His child and knows this Reality, for it is not true that knowledge is of phenomena or that human mental functionings are open to scepticism. "On the contrary, reality is implicate in all knowledge; and in every exercise of the knowing faculty the testimony plainly is—I, the actual, am not afar off, but nigh thee, even within, an integral part of thy Self, the knower. The doubt of this truth—the truth of all truths—is so irrational, so absurd, that it does not even admit of a consistent and intelligible statement by one mind to another, or by any one to one's own conscious mind."

It is impossible to reason with, very difficult even to criticise, a writer whose conception of a fundamental discussion of ultimate problems differs so much from that of ordinary people. But for the reader who can conscientiously adopt Prof. Ladd's *Weltanschauung* the book is of considerable value. A fair summary of its contents would run somewhat as follows: Ye are Christians, walk worthily of your Vocation—your Vocation is to realise the Moral Life—the Moral Life is not a theoretical abstraction but a concrete Personal Ideal functioning in certain definite

ways called Virtues—these Virtues are many in number, but are all related as functions of the one Self—hear them, in detail, what they are and how to realise them—remembering always that they must be realised in the World and that *the World is God's world.* [The *italics* are Prof. Ladd's.] Such a reader will find himself strengthened by much thoughtful analysis; he will be practically helped by many sound maxims, and will (doubtless) be sympathetically stimulated by the concluding exhortation (p. 653): "Hold to the Ideal and ever lift it up; be sensible and wise in practical affairs, patient with yourself, and with all men, and with God—also, courageous, and full of faith and hope".

W. H. Fairbrother.

The Strength of the People. By Mrs. B. Bosanquet. Macmillan & Co., 1902. Pp. vii., 345.

Mrs. Bosanquet speaks, towards the close of this book, of the importance of expert opinion in social questions; and there are few better qualified, by their combination of historical and speculative knowledge with practical experience and sympathetic effort, to take rank as experts in the subject. Yet we think the book likely to illustrate how limited is the authority which in such a field expert opinion can hope to command; some will welcome it enthusiastically as a statement at once scientific and sympathetic of the true principles on which social work should be undertaken; while to others we can imagine it seeming cold and unprogressive. For the lesson it teaches is that there can be no short and easy road to better things, by legislation imposing new conditions from without; that the secret of improvement lies in influencing character, in supplying people with more and better interests, in convincing them that circumstances are what they make them, and not they the children of circumstance. This is the keynote struck in the Introduction, a good exposition of some very simple psychological truths, far older than those researches of modern psychology into the life of the lower animals, to which Mrs. Bosanquet, on page 6, accords acknowledgment after the fashion of the time. The same principle is reiterated throughout the ensuing chapters, and very forcibly presented in divers ways: by a brief and striking summary of the mischiefs that followed from ignoring it under the old poor law; by an account of Chalmers's success in the Parish of St. John's, Glasgow, as well as in various other passages. Perhaps we should make special mention of the typical history of the good and the bad housewife in chapter iii. It is not unlike Plato's descriptions of typical characters in *Republic*, viii. Like them, it carries conviction: but like them also, it is a 'pure case,' such as but few completely illustrate.

It is probably true, that a man in whom the higher interests are strong enough—interest in his family, in his independence, in the work of club or church or chapel—will find in these a stimulus to work and save, that will bring him well through life, without recourse to charity or the relieving officer. But can you expect so much character in the average man, especially when you consider the conditions under which childhood is passed by many in our cities? Many, who answer no, are prepared therefore to give public assistance, in the form of free dinners, free breakfasts to school children, old age pensions, and such like, or a legal minimum wage. Mrs. Bosanquet's contention is that these palliatives are bound to fail; that any provision which weakens a man's interest in his own independence costs him more than it can bring: economically, because by inducing an expectation of help for which he has not worked, it lowers his output far more than to the extent of the gift; morally, to

an incalculable degree. In particular are measures mischievous which weaken the solidarity of family ties, and the sense in its members that it lies upon them to provide one for another. We love others and care for them, not because of what they bring us, but of what they call forth from us. When the Poor Law undertook those offices which men should themselves render to their parents, the result was that men threatened to turn their parents out of house and home, in order to extort more money from the overseer; and to-day again, in London, they go away, disappearing with no address, and leave parents destitute, in order that the Guardians may be forced to undertake their support. Mrs. Bosanquet acknowledges that this is sometimes done because it is thought the Guardians can do better for them; but the fact remains, that men are improved by what calls forth their energy and interest, rather than by dole or gift.

What then is to be done? Try and make skilled workmen and workwomen out of the unskilled; this will raise the wages of the unskilled as well, by diminishing their numbers. Administer the Poor Law strictly and scientifically; but let there be in every Union an efficient organisation of private charity. Do something after the fashion of Chalmers's 'parochial system,' with individual knowledge of special needs. Get hold of the children, especially when they are leaving school. Encourage 'institutional charity'. But do not attempt to make the State a partner with the individual in bearing his private burdens; "the partnership is too unequal"; he will conceive the State should bear a larger and larger share. The spring of independence will be gone; and what they have not themselves worked for, men will not care for.

Mrs. Bosanquet seems sometimes to overstate her case, as, for example, when she says that "in practice few people can resist the claims of a need which is greater than their own, when brought face to face with it": and in her treatment of the housing problem, in chapter vi., when the difficulties presented by an actually insufficient supply of houseroom are unduly minimised. And those who doubt the possibility of finding sufficient workers who possess the moral force that is to call forth the latent capacities of higher character in those for whose benefit socialistic legislation is mainly intended, will probably still cling to the hope of effecting reform *ab extra*. Yet even they must admit that a great deal which she urges is absolutely true, and very necessary to consider: whether or not the socialism which she dreads would, as she thinks—if the hazardous experiment be ever made—prove incompatible with the true spirit of independence, and the best form of family life.

An Introductory Text-book of Logic. By Sydney Herbert Mellone. William Blackwood (Edinburgh and London), 1902. Pp. xiii., 362.

Dr. Mellone has aimed (1) at giving "an accurate exposition of the essentials of the traditional logic," (2) at connecting it "with its Aristotelian fountain head," and (3) at showing "the open door leading from it to the modern philosophic treatment of the subject"; and difficult as it was to attain all these aims adequately in so moderate a compass, he may be congratulated on achieving a very considerable measure of success. He has at least produced a clear, interesting and decidedly useful elementary treatise from his own point of view, *viz.*, that of what may be called the Oxford tradition in logic, as expressed in the works of Messrs. Bradley and Bosanquet. In particular, Dr. Mellone makes out a good case for what seems at first a considerable paradox, *viz.*, that the most modern improvement in logical theory should take the form of a

constant reference to Aristotle. It is strange, however, that he should have in this connexion omitted to explain the meaning of "essence" and to discuss the Aristotelian doctrine on the subject (without which Aristotelian logic is really unintelligible), especially as he himself is constantly speaking of "essential" qualities, etc. As for his relation to modern philosophy Dr. Mellone gives, in the main, a good popular statement of the criticism of empiricist logic initiated by Mr. Bradley, and it is, of course, a considerable service to beginners to have a door opened into a region as arduous as it is fertile. And I find also in Dr. Mellone distinct glimpses of something still more interesting and important. There are symptoms that the results of the psychological study of actual human thinking are at last beginning to percolate into the rigid representations of logical norms, and to act as solvents of many indurated technicalities. So at least I interpret Dr. Mellone's emphasis on the *selectiveness* of observation (p. 264), and the arbitrariness of practical purpose which selects the antecedent which shall be regarded as the "cause" (pp. 256, 259). It is true that he appears to exclude the 'scientific' notion from the scope of his remarks, but it is easy to see that the scientific conceptions of causation are no less relative to the purposes of the various sciences. And if Dr. Mellone will allow himself to think the matter out, he will see that he has inserted between the joints of the traditional logic's harness the thin end of a very long wedge. To recognise the omnipresence of selective attention in our thinking, is to admit its fundamentally purposive character; to admit this, is to admit the conditioning of our thinking by volitional and emotional processes, and therefore, in principle, to banish from logic the cumbrous fictions of "pure thought". Thus "selective attention" means, inevitably, "pragmatism," and pragmatism means a far-reaching transformation and extensive simplification of the traditional formulas. But, perhaps, Dr. Mellone at least suspects a good deal of this, which will be found to be nothing less than the promise (or threat) of a logical reformation.

F. C. S. Schiller.

Mutual Aid. By P. Krapotkin. London: William Heinemann, 1902.

Prince Krapotkin's argument may be briefly summarised as follows: Huxley's comparison of the animal world to a gladiatorial show, "where the creatures are fairly well treated and set to fight; whereby the strongest, the swiftest and the cunningest live to fight another day" is not a true representation of the observed facts of animal life: such a struggle, assuming it to exist, would tend to exhaust and weaken a species, and could not alone lead to its progressive improvement: mutual aid is as much a law of animal life as mutual struggle, and as a factor of evolution has probably had a far greater importance, inasmuch as it favours the development of such habits and characters as insure the maintenance and further development of the species, together with the greatest amount of welfare and enjoyment of life for the individual, with the least waste of energy. In support of his first position Prince Krapotkin brings forward a considerable mass of evidence, in the face of which Huxley's famous comparison, already quoted, undoubtedly goes too far. It has always been regarded as too sweeping, by many British naturalists, but the most vigorous opposition to it has come from Russian observers of animal life on the large scale afforded by the steppe lands. In Prince Krapotkin's view far too little importance has been attached to environmental checks on overpopulation. Their action, he thinks, has not merely sufficed to

keep animal numbers below the point at which fierce individual competition would ensue, but has forced most species to adopt, in a greater or less degree, various forms of mutual aid. It is in the economy of effort and energy thus effected, and in the stimulus given by sociability to the growth of intelligence, that Prince Krapotkin sees one, if not the chief, cause of the progressive improvement of species. A great part of the book is taken up with the attempt to show that there is no historical proof that "the Hobbesian war of each against all" was ever the normal state of society. The earliest geological records show man already a gregarious animal. Such forms of mutual aid as the tribe, the village community, the guild, are examined in detail, and the conclusion is suggested that unfettered individualism is, on the whole, a late and abnormal phenomenon. What is undoubtedly proved is that we require much more extensive knowledge, based on unbiassed observation, of animal psychology and animal habit, and that in our present state of ignorance, the application of biological generalisations to sociology is likely to result in error. For this reason it would have been well to confine the present volume to the consideration of mutual aid among animals, with special reference to its bearing on physical and intellectual evolution. The subject requires and deserves the fullest investigation on its own merits.

A History of English Utilitarianism. By E. Albee, Instructor in the Sage School of Philosophy, Cornell University. London: Sonnenschein, 1902. Pp. xvi., 427.

Dr. Albee's History is a painstaking and judicious work which will be found useful by all who have to lecture or examine on the subject. For the junior student it is hardly suitable and still less so to the general reader, who will find the minute analysis and criticism of second- and third-rate Hedonists exceedingly wearisome. Its scope and method are quite different from Sir Leslie Stephen's well-known work. Sir Leslie begins with Bentham and takes little notice even of the predecessors to whom Bentham was immediately indebted. Dr. Albee begins with Richard Cumberland and does not reach Bentham till nearly half-way in his book. Sir Leslie devotes himself mainly to the social and political side of English Utilitarianism. Dr. Albee neglects this almost entirely to trace the filiation of abstract theories. His work is a summary of "isms," and never touches on personal character and concrete environment. We are never out of the strictly scientific atmosphere of the lecture-room.

Within the limits he has marked out for himself Dr. Albee's work is well, though not brilliantly, done. The summaries and criticisms are thorough and certainly do not err on the side of brevity, since J. S. Mill, Herbert Spencer and Henry Sidgwick have each three chapters assigned to them. Occasionally we are inclined to think that the wood has got obscured by the trees; and that in the minute discussion of the various and complicated forms of utilitarian theory we somewhat lose sight of the general tendencies and meaning of the whole development of thought. For this reason the latter part of the book is less interesting than the earlier, which explains the connexion of the secular utilitarianism of Bentham and the Mills with the older utilitarianism of theological writers.

H. S.

The Development of Modern Philosophy; with Other Lectures and Essays. By Robert Adamson, M.A., LL.D., sometime Professor of Logic and Rhetoric in the University of Glasgow. Edited by W. R. Sorley, M.A., LL.D., Professor of Moral Philosophy to the University of Cambridge. Blackwood & Sons, Edinburgh and London, 1903. Vol. i., pp. xlviii., 358; vol. ii., pp. 330.

The rich material contained in these volumes has been mainly collected from lecture notes by students. The first volume consists of a history of the "Development of Modern Philosophy" supplemented by "Suggestions towards a Theory of Knowledge Based on the Kantian". The History has merits which seem to me to belong to no other work of the kind in an equal degree I need not refer to the accurate and extensive learning which it displays. What gives it its most distinctive value is the systematic unity and continuity of the exposition, which follows persistently the development of certain fundamental questions relating to Theory of Knowledge. The attentive student who follows the guidance of Prof. Adamson cannot fail to realise fully that "History of Philosophy" is Philosophy itself in the making. The treatment of Kant is especially remarkable for the skill shown in disentangling vital and essential points from what is relatively unimportant, and all readers must find Adamson's criticism and critical reconstruction of Kantian doctrine in the highest degree instructive and interesting.

The second volume consists mainly of discussions bearing on the nature of mental development psychologically considered, on Theory of Knowledge, and especially on the relation of Theory of Knowledge to Psychology. Prof. Adamson's original, penetrating and thorough treatment of these topics is extremely stimulating and suggestive. In particular, the connexion of Psychology with Epistemology has never, in my opinion, been handled with so much insight and thoroughness. Fuller notice of this important work will appear in another number of Mind.

Editor.

Kant's Prolegomena to any Future Metaphysic, edited by Dr. P. Carus, Chicago: Open Court Publishing Co.; London: Kegan Paul, Trench, Trübner, 1902. Pp. v., 301.

Leibnitz, Discourse on Metaphysics, Correspondence with Arnauld, and Monadology. Translated by Dr. G. R. Montgomery (same publishers). Pp. xxi., 272.

These two additions to the series of philosophical classics issued at low prices by the Open Court Publishing Co. should meet with an extended sale. All who have to teach Kant's Philosophy to ordinary students must have felt the need of a translation of the *Prolegomena* sufficiently cheap to be accessible to the reader with a slender purse. The Leibnitz volume will be exceptionally valuable as containing the first English version of the *Discourse on Metaphysics* and the correspondence with Arnauld, of which the supreme importance for a knowledge of Leibnitz has been so recently shown by Mr. Russell. As the editors decided to annex the *Monadology* to these less-read treatises, it is almost a pity they did not see their way to include the *Principle of Nature and Grace* as well; but it is, perhaps, ungraceful to complain of so useful a book for not being even better than it is. In both cases the work of translation has been efficiently performed. The supplementary matter supplied

to the *Prolegomena* by Dr. Carus is extensive, but perhaps not as judiciously put together as it might have been. Some account of the transpositions detected by recent criticism in the text of the first edition might well have replaced the page given to discussion of the trifling question of Kant's relation to Swedenborg.

A. E. Taylor.

Le Fonctionnisme Universel: Essai de Synthèse Philosophique: Monde Sensible. Par Henry Lagrésille. Paris: Fischbacher, 1902. Pp. 580.

This work attempts a synthesis of the visible world, considered purely as characterised by intelligible function, from the infinitely small functions of atoms to the supreme function of the "star Solis". The idea of "functionism" is capable of extension from mathematics to morals. As variable numbers are bound in a constant relation, so the acts of real individuals are reciprocally connected in a vital function. Confined by abstraction to the category of extension it is mechanical; but all functions are in origin creations of the free activity of spirit, latent in atoms, explicit in social forms, where being determines itself. All functions are ideas, laws. Under phenomenal activities subsist living ideas, monads exercising persuasive force, *ἐνέργεια ἀκινησίας*, which, as one visible influence opposing another, assumes for us the character of coercive force. A Metaphysic aiming at completeness must go on to develop in idea the psychical and moral aspects of the active development of Being, and this the author intends to do, undertaking, when he finds time, *à trancher par des solutions assez nettes tous les grands problèmes philosophiques*. No lack of confidence, you will observe. The author bases his system on the primary intuition of voluntary activity, revealing, so he claims, the notion of reason, in the three immediate ideas of cause, good, voluntary power of action, united in one concrete relation. He develops it by means of his three supreme and immutable laws: the law of universal reason, the internal law of the act; the law of movement, its external law, and the transcendental law of universal analogy. He considers philosophy as at present cultivated, almost as an effete literary pursuit; but perhaps his knowledge of it might be extended with advantage. He can scarcely hope to return to the doctrine of innate ideas, contenting himself with a bare enumeration of the principles of reason, without offering any deduction of them, or imagine that to define Metaphysics as simply a universal Psychology (p. 41) is satisfactory at this time of day. In fact, as a philosopher he is old-fashioned, holding of Leibniz, and developing a view of the world that had already been sketched by Kant in the *Nova Dilucidatio*, to say nothing of Lotze. Space is the possibility of action among bodies, an immanent divine continuum, penetrating and supporting all beings. When the last form has been suppressed, matter disappears with spatial limit, leaving immaterial substance. Matter consisting in nothing but a constant proportion among the variable actions of immaterial forces. M. Lagrésille is impatient to be done with abstract discussions in order to shed the illumination of mystic insight over the sciences of external nature; or, as it might seem, to take refuge in myth. I have read with curiosity and interest the amazing mixture of science and mysticism which follows his general introduction. Written with great spirit, if, at times, carelessly, *à grands flots d'encre*, this part has a hypothesis to explain everything. Merely to mention the points on which the author has theories would exceed my remaining space; radiant matter, the elements of liquids and solids, gravitation, explained by a law of interception of ether impulsions,

the spots on the sun, and their connexion with the vortices of Descartes, and the formation of planets, may be referred to. Whether it is altogether a work of imagination remains for the scientist to say; at times, as, for example, when dealing with what he terms *Astrobiologie* M. Lagrésille passes out of the domain of criticism, whether he rises above it by virtue of the access he claims to regions of experience not open to normal humanity, or falls below it by condescending to mere extravagance. I am afraid that neither the philosopher nor the scientist will care much for this book, but the theosophist may find it edifying.

DAVID MORRISON.

L'Évolutionisme en Morale: Étude sur la Philosophie de Herbert Spencer. By JEAN HALLEUX. Paris: Félix Alcan, 1901. Pp. 228.

This is a critical account of the Evolutionary Philosophy with the *Data of Ethics* for text. Ostensibly divided into two, it falls easily into three distinct sections. The opening section is a fairly accurate *résumé* of the first eight chapters of Mr. Spencer's work. The second section aims at proving that man's evolution from the ape, or even from a type resembling the modern savage, is an open question. In the only part of the work that is strictly ethical the relevant and irrelevant are curiously mingled. Man longs for an ideal, which, the author insists in contrast to Mr. Spencer, must be personal; the altruism of the *Data of Ethics* can have no claim on man as he really is, and still less on man as Mr. Spencer conceives him, for the chain of argument by which that altruism is reached will not stand scrutiny. Further, this ideal is not realisable on earth; Mr. Spencer's philosophy can give no comfort to the "disinherited of this life," nor any sound warrant for deferring the gratification of the moment, pleasure-value being purely subjective. The arguments, however, on which most stress is laid are of a different type, namely, that a belief in the supernatural is universal, that duty has always spelt struggle, and that religion and morality have never yet been divorced in the world's history. The civilising effects, for instance, of the various religions, and especially of Christianity, are dwelt upon at great length. The author, in fact, often fails to trace the real starting-point of Mr. Spencer's arguments, and he never seems quite to realise where it is that he and Mr. Spencer part company. The book, too, as a whole, is excessively wide in scope. Still the criticism is commendably temperate and contains much that is suggestive, in a style that flows, sometimes sparkling, and always clear.

F. G. NUTT.

Die Grundsätze und das Wesen des Unendlichen in der Mathematik und Philosophie. Von Dr. KURT GEISSLER. Leipzig: Teubner, 1902. Pp. viii., 417.

The present work is not destitute of ability, but unfortunately the author has failed to grasp the importance for his subject of Cantor's work on the infinite, and of the modern elimination of the infinitesimal by the method of limits. Consequently it may be doubted whether his book does more to advance the subject than would be done for Astronomy by a book based upon the Ptolemaic theory.

The first 297 pages deal with various special mathematical problems, taken almost wholly from Geometry and Dynamics, not, as might be wished, from Arithmetic. These problems are designed to illustrate the

necessity of the infinite and the infinitesimal in explaining curves, tangents, irrationals, continuity, velocity, acceleration, the infinitesimal calculus, etc. Various contradictions liable to arise in treating these subjects are discussed, and are solved by the old doctrine of orders of the infinite and the infinitesimal, together with a logico-metaphysical theory which the author calls that of *Behaftungen*. It is unfortunate for his views that the infinitesimal is now known not to occur in any of the problems which he discusses, being replaced everywhere by the doctrine of limits; it is still more unfortunate that the idea of orders in the infinite and the infinitesimal has been shown to be quite inexact and vague. When two infinite series of finite numbers, whose n^{th} terms are x_n and y_n respectively, are such that, given any finite number N, there exists a finite integer n such that x_n, y_n, and x_n/y_n are all greater than N, we say that the limits of the two series are infinite, and that the series of x's becomes infinite of a higher order than the series of y's. But as a matter of fact both series have as their limit the same number, namely, the number of finite numbers. Similarly where infinitesimals appear we have really nothing but series of finite numbers whose limit is zero. That infinite divisibility involves infinitesimals is assumed by Dr. Geissler as self-evident, although, in the case of the rational or the real numbers, the opposite is capable of formal proof. In Euclidean space, as treated by analytical geometry, although space is infinite and infinitely divisible, yet every distance is finite, *i.e.*, has a finite ratio to every other distance; and the apparent impossibility of such a state of things is a mere illusion dispelled by exact reasoning.

Pages 297-335 are occupied in a historical review of opinions as to infinity. Only seven pages in the whole book (pp. 325-332) are devoted to Cantor, with whom the author appears to be very imperfectly acquainted. He discusses chiefly the more or less popular "Zur Lehre vom Transfiniten"; it is doubtful whether he has read the "Grundlagen einer allgemeinen Mannichfaltigkeitslehre," and he appears to have never heard of the very important articles in *Math. Annalen*, volumes 46, 49. He mentions Cantor's sketch of a proof that there are no infinitesimal numbers,[1] which consists in showing that, if there were an infinitesimal number ζ, and if v were any transfinite number, however great, ζv would still be infinitesimal. Dr. Geissler retorts (p. 328): But how if instead of v we were to put a magnitude not obeying the prescriptions for the so-called transfinite numbers? This retort is disposed of by the logical theory of Arithmetic, which proves the impossibility of our author's hypothesis. He objects also that Cantor has not established the existence (in the mathematical sense) of his transfinite numbers. On this point, it is true, the theory requires some supplementing; but what is necessary is easily supplied. It can be proved that every class has a number, and the finite integers form a class, but they have no finite number of terms; consequently they have an infinite number. The doctrine of the transfinite is not merely, as Dr. Geissler is willing to allow (p. 331), one among possible theories of infinity; it can be proved, from the general principles of Logic, to be the only possible theory. To deny this it would be necessary to deny the Syllogism, or the Law of Contradiction, or some equally elementary proposition of Logic.

The last eighty pages are occupied in philosophical considerations, concerning chiefly the doctrine of *Behaftungen*, with which is connected a theory of so-called "metaphysical relativity". This theory maintains

[1] Which is expanded and rendered intelligible by Peano, *Rivista di Mat.*, vol. ii, pp. 58-62.

that relations (and in particular ratios) are prior to their terms, and that, given a ratio of two distances or of two periods of time or what not, we can regard the terms of the ratio as finite or as infinite or infinitesimal of any order, the ratio remaining unchanged. The author also distinguishes various degrees of Being, by means of which it is possible to hold at the same time that a thing is in one sense and is not in another, thus solving apparent contradictions. Whatever value may belong to these views on their own account, it is certain that they do not contribute to the solution of the problem of infinity, which has been found without their aid.

The motives which have led mathematicians to turn their subject first into Arithmetic, then into Logic, are very strong, but a serious attack upon this procedure would be valuable. It is to be hoped that Dr. Geissler will give us this in some future work, together with a defence of his own position against the criticisms which naturally occur to the mathematician.

B. Russell.

Das Urteil bei Descartes. Ein Beitrag zur Vorgeschichte der Erkenntnistheorie. Von Dr. Broder Christiansen. Hanau: Verlag von Clauss & Feddersen, 1902. Pp. 107.

Dr. Christiansen adopts the following division of his subject: (1) Analysis of Judgment according to Descartes; (2) Judgment and Truth: the Test of Truth; (3) Judgment and Reality: the problem of Transcendentalism. Under (1) he clearly points out the development that took place in Descartes' view of the nature of judgment from his first treatment of the subject in the *Regulae* where on the whole he conceives judgment as a synthesis of ideas and the negative judgment as a special case of the positive, to his later treatment in the *Meditations*, etc., where he conceives judgment as essentially an act of affirmation or denial, and the negative and positive as distinct kinds of judgment. In these very first pages our author's clear and scholarly manner makes itself felt. Perhaps the only uncertainty his treatment leaves in the mind is as to whether he is right in assuming that when Decartes refers to a synthesis of ideas in the *Regulae* he is really stating his theory of judgment (*cf.* pp. 12, 13 with p. 59, end of § 2). Dr. Christiansen then deals with Descartes' more matured theory of judgment, and after a keen criticism of Brentano's view that judgment, according to Descartes, was an act *sui generis*, concludes that it is essentially an act of will. There is, of course, a theoretical element, the idea, involved in the judgment, but it only serves as object or material for the volitional factor, the act of assent in which the judgment essentially consists. Our author follows up this analysis by an extremely thorough treatment of the two elements involved in judgment, the theoretical (what did Descartes mean by an idea, and by an innate idea in particular?) and the volitional. With regard to the relation between the two in judgment it is important to notice that the intellectual insight which assures us that a certain idea is real or materially true exercises no constraint on the will. The assent of the will to the truth of the idea follows out of its own nature, the will in its purity being essentially a striving after the True and the Good. The intellectual insight is only the 'occasional' cause of the act of assent whereby the judgment is completed. At the same time though this intellectual insight into the true (*das Erkennen*) is in itself no judgment, the judgment (*das Anerkennen* can only guard itself from error by making an intellectual apprehension of truth the precondition of its assent. The judgment is true (formally) only when the idea assented

to is recognised by the Intellect as true (materially). Hence three factors in a complete act of judgment: the idea judged (*die Urteilsmaterie*), the intellectual perception of its truth (*der Urteilsgrund*) and the volitional recognition of its truth (*der eigentliche Urteilsakt*). At the close of a remarkably able discussion of the *perceptio clara et distincta* Dr. Christiansen sums up the process of judgment in its completest form as follows: The Intellect supplies in the first place the idea, the matter of the judgment, but in no way determines the will to judge. Then the will, in the form of Attention concentrated on the idea and on the interconnexion of its component elements, incites the intellect to a consciousness of the valid grounds of the judgment; once the clear and distinct perception of the idea is thereby reached, the decision necessarily follows in accordance with an innate tendency of the will. If we proceed to ask how we are to gain objective assurance of the clearness and distinctness of our insight Descartes answers that such assurance is the natural product of that long discipline of doubt whereby all that obscures the natural light of reason—rooted prejudices and unmethodical ways of thinking—is sifted away. The last section deals with the difficulties which Descartes' rationalism meets so soon as it forsakes the truth-mark of necessary connexion for that of a conformity of thought with its object. Descartes concedes that the existence of finite external object cannot be grasped by us in a purely intellectual way. Finally, he is thrown back for his ultimate guarantee of truth upon the arbitrary will of God. Rational Knowledge is thus found to be rooted in the irrational.

It would be hard to overpraise this pamphlet. Fine distinctions and criticisms freshen the work from beginning to end. Though our author's conclusions are in no sense revolutionary they are developed with marked originality, conspicuous clearness and convincing thoroughness. It is the work of an efficient scholar and cannot be too cordially recommended. If translated, it would furnish a model Honours text-book for the student of Descartes.

W. R. Boyce Gibson.

Ethik. Von Max Wentscher. I. Theil. Leipzig, 1902. Pp. xii., 368.

The present volume deals only with the fundamental questions of ethical science, the nature of its subject-matter and methods, and its ultimate metaphysical presuppositions, all discussion of special rules and problems of conduct being postponed to a forthcoming second part. Mr. Wentscher treats of the venerable topics to which his book is devoted with a pleasing freshness and individuality none too common in works on Ethics. His leading idea is well indicated by the quotations from Kant and Nietzsche which appear as mottoes on his title-page. The one indispensable pre-requisite of Ethics is the recognition of the reality of human freedom. So far the author is in fundamental accord with Kant whom he regards, in spite of shortcomings and obscurities, as the founder in modern thought of a genuine moral philosophy. He rejects, however, Kant's unfortunate metaphysical interpretation of freedom as a possession of an imaginary "noumenal self". Freedom, to be of practical value, must belong to the self of actual experience. To be free means to be capable, by individual intellectual reflexion, of emancipating one's acts from the influence of mere habit, unsystematised impulse, and social tradition, and making one's life into the conscious expression of self-chosen purpose. Freedom is thus not irresponsible

liberum arbitrium, but self-determination, and is identical with individuality of character. These results, closely identical with the doctrines of our recent English "idealists," are reached along lines of reasoning mainly based upon acute observation of historical and psychological fact, and scarcely dependent at all on the metaphysical constructions of post-Kantian philosophy. To some of us they are perhaps all the more satisfactory in consequence.

Mr. Wentscher's affinity with Nietzsche comes out in his interpretation of Freedom as at once the end and the presupposition of Ethics. For a free agent the ultimate ideal must be freedom itself, the actual exercise of a will which is the expression of self-determining character. Freedom is thus the same thing as the highest possible development of the individual will, and we must say with Nietzsche, "Will maketh free; this is the true doctrine of will and freedom". Freedom is thus not an initial datum or endowment of human nature; in the original capacity to reflect on our acts, we have merely a predisposition towards freedom; freedom itself has to be won by the actual habitual exercise of self-determined volition.

Mr. Wentscher's book falls into two principal parts. In the first, after a brief introduction which identifies the subject-matter of Ethics with the phenomena of conscience, he analyses the processes of conscience themselves. The general outcome of his analysis is to distinguish three main influences which determine the self-approbation and self-censure of individuals in various proportions at various levels of culture. Approbation is bestowed first and with least conscious reflexion on the qualities which give the individual an enhanced sense of power and importance (the *noble* values of Nietzsche), next, under the influence of social tradition, on qualities which are found *useful* to the community at large (the *utilitarian* values), finally, where systematic individual reflexion has set in, on all that extends and develops the individual's power of free self-determination. The individual's approbations and censures of this last reflective kind constitute the "intellectual" conscience. Examining the various attempts of ethical theory to formulate ultimate moral axioms for the guidance of the intellectual conscience, the author rejects the claims of empirical Eudæmonism to prescribe principles for conduct. He decides that ethical axioms can only be obtained by an *a priori* idealistic method, and argues at length that the various ideals of individual perfection, social equity, etc., are all special modifications of the general principle that a potentially free being should aim at the highest development of a true individuality. In the second part of the volume the author discusses the various objections brought against the concept of free agency by the various types of determinism, and seeks to show their fallacious character. He is usually felicitous in his criticism of the determinist assumption, but one may perhaps suggest that it is a weakness in his treatment of the subject that he is willing to admit the domination of rigid causal uniformity, as actual, *except* in the ethical sphere. One would have liked some examination of the whole idea of "causal law". Until we have discussed the claim of the causal scheme to give truth anywhere, it is a doubtful assumption that moral freedom means the exemption of human conduct from conditions elsewhere valid.

A. E. T.

GUIDO VILLA. *Einleitung in die Psychologie der Gegenwart; nach einer Neubearbeitung der ursprünglichen Ausgabe aus dem Italienischen übersetzt.* Von CHR. D. PFLAUM. Leipzig: Teubner, 1902. Pp. viii., 484.

Signor Villa is to be warmly congratulated on the excellent German translation of his important work *La Psicologia contemporanea*, a notice of which appeared in this journal two years ago. As stated above, the original has undergone considerable revision—an arduous, not to say irksome task, but carried through with successful energy and discernment. The superabundant bulk has been reduced by more than one quarter. The materials have been here and there re-arranged, and here and there developed and enriched. In particular, the second part of chapter iv., 'I metodi di esposizione,' has been detached, and forms, as chapter vii.: 'The synthesis and evolution of mental life,' a fitting sequel to the analysis of the three phases or functions of mind in chapter vi. The range of the work is now very complete, the translator having contributed a sketch of contemporary Russian psychology, and immensely enhanced its serviceableness besides by name and subject indices, by page headlines and by a lucidity of style not inferior to that of the original. Those who cannot follow even lucid German may await in hope the appearance of an English translation, which is now, I believe, in process under the author's supervision. In view of this and of other future editions, one or two minor matters may be pointed out. In the historical survey of English thought, Hobbes should find a place (to whom in far narrower compass Prof. Höffding's *Psychology, e.g.*, does justice). And in so catholic a work, mention might be made of original departures like that of M. Arréat's monographs "Psychologie du Peintre," etc., and of M. Le Bon's "Psychologie de la Foule". A slight trace of imperfect revision seems apparent on page 393, where the promise of fuller treatment in the concluding chapter, now purged of re-arranged matter, is no longer kept. In this chapter, now containing an admirable *rêsumê* of results established by modern psychology, one line perhaps might benefit by modification. The phrase (p. 471, l. 10) . . . 'obwohl sie nichts mit dieser zu thun hat,' referring to psychological reality *v.* material reality, may be true in a way. But in view of the author's preceding expositions of thoroughgoing Parallelism, and, in particular, of the "very relative independence of psychical and physical sequences" (p. 458), the line given above, if quoted without context, might render him as liable to be misunderstood as the Bible or a politician's speech. Finally, it would be of special interest to English readers, and of general historical value, if so cultured a Wundtian and so discerning a critic were to juxtapose his discussion of British "psychology without soul," and of the conversion in Germany from the *Substanzbegriff* to some form or other of the *Aktualität aller psychischen Thatsachen*, and estimate how far there is agreement in all but words.

C. A. F. RHYS DAVIDS.

Estetica come Scienza dell' Espressione e Linguistica Generale. Da BENEDETTO CROCE. Milano, 1902. Pp. xx., 550.

Less than a third of this volume is occupied with the theory and the remainder with the history of æsthetics. Æsthetic experience is, according to the author, cognitive, coinciding with intuitive as distinguished from conceptual knowledge. Stated otherwise, it is the consciousness of an image which may or may not correspond to an objective reality. To

perceive an object, to call a work of art into existence, and to speak are identical processes. In each of them we convert an impression into an expression. Unfortunately, the author has not taken the trouble to analyse the notion 'expression' or to distinguish the various processes to which the word can be applied. In simple perception the raw materials of sense are sifted out, ranged in a certain order of space and time, and associated by contiguity or resemblance with other resuscitated sensations. Any one who likes may, of course, call the mental activity involved in this process expression instead of perception; but to identify it with what is called catching the expression of a face, and on the strength of this equivalent to describe both activities as æsthetic facts is merely misleading. For the expression of a face means its power of suggesting mental qualities to the beholder, which is not *in pari materia* with the suggestion, say, of tactual by visual sensations. And the case is worse when we come to language, where auditory or visual impressions are converted into signs of concepts.

In the historical portion of the book the most original point seems to be the prominence given to Vico, whom Signor Croce considers 'the first discoverer of æsthetic science'—a wonderful criticism, not in the least justified by what the author himself quotes from the *Scienza Nuova*.

A. W. B.

W. Wundt's Philosophie und Psychologie in ihren Grundlehren dargestellt von Dr. Rudolf Eisler. 8vo. Leipzig, 1902. Pp. vi., 210. Price, M. 3·20.

Within certain limits an admirable abstract of the method, principles and conclusions of Wundt's philosophical system. It is indeed to be regretted that Dr. Eisler has so severely restricted the scope of his book, and more especially that, for reasons of space and in consideration of E. König's recent work, he has omitted any but the most general treatment of Wundt's ethics, an omission that naturally results in a certain incompleteness. Criticism is scarcely attempted, though the few critical remarks that are inserted make one wish for more. But, so far as it goes, this book deserves all praise. It keeps, perhaps, too close to the details of the original to serve as an Introduction; but it cannot fail to be of service to those who have studied Wundt already, since it brings together connected topics that are scattered through numerous lengthy volumes and makes possible a rapid survey of the whole field.

T. Loveday.

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G. Portigliotti, *Psicoterapia*, Milano, 1903, pp. xi., 317.

VII.—PHILOSOPHICAL PERIODICALS.

Philosophical Review. Vol. xi., No. 4. **E. B. McGilvary.** 'The Consciousness of Obligation.' [We may accept Kant's distinction between the hypothetical and categorical imperatives. Corresponding to the former is the consciousness of conditional or teleological obligation; corresponding to the latter is that of absolute obligation. (1) The consciousness of teleological obligation has reference to the relation objectively existing between an action, its known result, and the desiderative attitude the agent takes towards that result. We say to ourselves: Do this, because you want that. In analytical terms: "the reasoning process of a person with a definite desiderative nature takes place in a concrete situation, and produces a result, of which a definite desire in its particular strength is a part. Such a desire is therefore properly called a concretely reasonable desire." The function of ideals: there is nothing peculiar about the obligation imposed by an ideal, that should differentiate it from other teleological obligations. (2) Kant's definition of the categorical imperative cannot be accepted; for there are imperatives which are taken "by human beings as unconditionally binding on them, and yet which are not 'objectively necessary' in the sense of being 'valid, not merely for men, but for all rational creatures generally'". The categorical imperative is "a consciousness of unconditional obligation which in normal cases has reference to some more or less definitely conceived action or disposition, but which only in certain instances is regarded by the subject experiencing it as binding" in the Kantian sense. It is due, in some small measure, to the economy of mental short-hand, the reason dropping out of the command; but chiefly to the 'suggestive' influence exerted by the word of command as such. (3) In sum, then, there are the analytically teleological imperative, which is reasoned; the analytically categorical but genetically teleological imperative, which has been reasoned; and the analytically and genetically categorical imperative, which never was reasoned.] **J. Dewey.** 'The Evolutionary Method as Applied to Morality. II. Its Significance for Conduct.' [The genetic method "unites the present situation, with its accepted customs, beliefs, moral ideals, hopes and aspirations, with the past. . . . Whatever can be learned from a study of the past is at once available in the analysis of the present." The method "eliminates surds, mere survivals, emotional reactions, and rationalises (so far as that is possible at any given time) the attitudes we take, the ideals we form". Both empiricism and rationalism, in different ways, deny the continuity of the moralising process; their ultimates are timeless, and hence absolute and disconnected. "If our moral judgments were just judgments *about* morality," the results of the historic method "might be of scientific worth, but would lack moral significance, moral helpfulness. But moral judgments are judgments of ways to act, of deeds to do, of habits to form, of ends to cultivate. . . . To control our judgments of conduct . . . is in so far forth to direct conduct itself."] **W. Smith.**

'The Metaphysics of Time.' ["Neither psychology nor metaphysics warrants the retention of the concept of time taken in the sense of succession. What we call time is a representation made up of space and certain sense factors by means of which we picture the order in experience which is not temporal, but may, for want of a better term, be called logical. The truth of change is to be found not in the transition from being to nothing and from nothing to being, but in the infinite diversity of finite experiences."] Reviews of Books. Summaries of Articles. Notices of New Books. Notes.

Psychological Review. Vol. ix. No. 4. **J. R. Angell.** 'Studies from the Psychological Laboratory of the University of Chicago.' **H. J. Pearce.** 'Experimental Observations upon Normal Motor Suggestibility.' [When we localise a single stimulus (visual, auditory or tactual), we ordinarily make an error in the direction of the point upon which attention is turned at the time of the application of stimulus; the error increases largely with distance of stimulus from point of attention. If a second similar stimulus is given, there is a tendency to resist its suggestion; but as the applications are repeated, the suggestion becomes increasingly effective, causing an error in the direction of the second stimulus. The resistance to this form of suggestion is most vigorous when the direction of suggestion is opposed to that of the normal error tendency; ultimately, however, such an antagonistic suggestion is most effective. Variations of intensity and distance of the suggesting stimulus are followed, within limits, by corresponding variations in result. The suggestive power of the distractor is approximately the same in all three sense departments.] **E. A. McC. Gamble.** 'From the Wellesley College Psychological Laboratory: The Perception of Sound Direction as a Conscious Process.' [Perception of the direction of a telephone click is not usually based upon consciousness of timbre, intensity, pitch, or any kind of place-mark or space-value in the sound itself. Timbre and intensity criteria develop with experience in auditory localisation, and seem in a measure to presuppose it. Cutaneous impressions about the head and ears sometimes serve as localisation factors. Auditory localisation at large is a rough counterpart of cutaneous localisation; it proceeds originally by reflex head and eye movements, which drop out with practice. As evidence collateral to that derived from the experiments, the author reminds us (1) that suggestion has no marked effect on strong tendencies in the perception of direction; (2) that it hinders accurate localisation, as thought will hinder an automatic muscular co-ordination; (3) that unpractised observers tend to localise sounds behind them,—the relic of a serviceable reflex; and (4) that alleged immediacy of localisation is coupled with relative accuracy.] **A. A. Aikens, E. L. Thorndike, E. Hubbell.** 'Correlations among Perceptive and Associative Processes.' [Measurement of relationships "in the case of a number of functions, all of which depend upon quickness and accuracy in associating certain thoughts or acts with certain percepts, either directly, or indirectly through other ideas which the percepts call up". Marking of misspelled words, of words containing certain letters, writing of antithetical words, working of additions, etc. Table of correlations.] Discussion and Reports. **B. Bosanquet.** 'Imitation.' [How are we to explain the transference and operation of ideas by which men are social? Baldwin says, 'imitation'; the writer, 'logic'. "I cannot see how development into a group of interrelated elements . . . can be got by imitative process proper. . . . I do not believe that an explanation of logical process can be built up on imitation *plus* selection, and the facts seem to me to be in the main omitted by the imitation

theory."] **J. H. Hyslop.** 'Mr. Sumner's Review of the Piper Report. [Reply to criticism.] Psychological Literature. New Books. Notes.

Psychological Review. Mon. Suppl. No. 16. **C. Wissler.** 'The Correlation of Mental and Physical Tests.' [Description of tests: size of head, strength of hand, fatigue, perception of size, eyesight, colour vision, acuity of hearing, perception of pitch, of weight or force of movement, sensation areas, pain, colour preference, reaction time, rate of perception, naming colours, rate and accuracy of movement, rhythm and perception of time, association, imagery, memory. General results: the laboratory mental tests show little inter-correlation in the case of college students; the physical tests show a general tendency to correlate among themselves, but only to a very slight degree with the mental tests; the marks of students in college classes correlate well with themselves, but not with the tests made in the laboratory.]

American Journal of Psychology. Vol. xiii., No. 2. **A. J. Kinnaman.** 'Mental Life of Two *Macacus Rhesus* Monkeys in Captivity.'—II. [Number tests: the numbers 1, 2, 3 are clearly discriminated; 4, 5, 6 are seen as a somewhat definite mass; beyond 6 we have no measured quantity, but only an indefinite mass or group. Maze tests confirm previous conclusions, but throw no new light on intelligence or processes of learning. Indications of associative memory. Smell is not acute, the preponderating sense being sight. Individual differences are apparently as great as they might be between two human individuals chosen at random. Imitation, general notions, reason: the paragraphs which report these tests are properly prefaced by logical analyses of the terms themselves. The monkeys showed mimicry (which lies below the imitation level); instinctive imitation, or automatic behaviour; and, in two instances, imitation of the persistent and intelligent types. "Neither has imitated any of my acts. . . . The male has rarely done anything that could be regarded as an imitation of the actions of the female. The female, however, has imitated the male." The monkeys apparently had individual representations of percepts and generic images; intermediate abstractions, with bodily positions or calls as their signs, may have been present; such abstractions and higher concepts, requiring the use of language, are wholly wanting. Again, the monkeys showed evidence of implicit reasoning, immediate inference and adaptive intelligence; the author inclines, tentatively, to admit that they are capable of analogical reasoning; rational thinking and formal reasoning are beyond them. Appendix: habits and characteristics of the *Macacus Rhesus*. Bibliography.] **G. M. Whipple.** 'An Analytic Study of the Memory Image and the Process of Judgment in the Discrimination of Clangs and Tones.' II.—[Experiments by the method of reaction or of continuous change, the essential feature of which is the use of a continuously sounding variable, moving up or down towards the standard at a uniform rate, until arrested by the observer at the point of subjective equality. Results: some observers can classify and identify the standards in use by auditory-verbal, visual and other associative supplementing, and thus gain indirect aid in their reactions: the variable seems to move by stages, regular or irregular, which may be visualised; the direction of movement may evoke distinct emotional preferences; it is frequently misinterpreted, even in the procedure with knowledge: the method and basis of decision are individual matters, though certain types can be made out: there is a strong error of expectation, increasing generally as D increases: no observer can say definitely that a reaction is correct; there is an area, rather than a point, of equality: knowledge of the position of a coming

variable has little effect upon the quantitative results; it merely gives a feeling of security to the observer: a long time interval gives irregular quantitative results, owing largely to its destructive effect upon the image: distraction renders the identification of the standard and the apprehension of the position of the variable unusually difficult; complete distraction means attention to the variable and reaction without reference to an image: practice lessens the m. v., and unifies the course of the reaction consciousness for each observer, while accentuating individual differences: observers who excelled in the discrimination of discrete tones without the use of auditory imagery find the reaction to auditory equality best accomplished by keen attention to the standard and the use of an auditory image as basis of reaction. Miscellaneous tests: tracings of respiration, drawings of movement of variable tone, recognition-times in immediate judgments. The nature and course of the image: the memory image of a tone is not a tonal memory image, but that and much more; temporal course of the auditory image proper; tendency to flat, and its correction; effect of practice on serviceableness of image; habit of imaging and its relation to distractors. The structure of the judgment consciousness: auditory image unnecessary to judgment, whether of difference or of equality; it may be present and yet not mediate comparison; it may be an essential component of the judgment consciousness; analysis of imageless judgments.] **I. M. Bentley.** 'The Psychology of Mental Arrangement.' [Critical study of the work of Mach, Ehrenfels, Meinong, Cornelius, Witasek, Schumann, Lipps, Stout. The discussion shows (1) that one cannot draw a hard and fast distinction between sense and intellect, received content and mental creation, and (2) that "a complete descriptive account of a mental complex demands more than an enumeration of its constituent elements taken as isolated units". The author rejects the principle of consolidation. "The two concepts to conjure with are the concepts of analysis and attention." "The essential nature of a complex is determined, not by a funded or formal factor, but by the character of the elements themselves, the connexions into which they fall, and the state of attention in which the complex is given."] **J. W. Slaughter.** 'The Moon in Childhood and Folklore.' [Study based on questionary material collected by G. S. Hall. Substance, distance, etc.; connexion with weather; the man in the moon; the moon and morals; place of departed; effect of phases; moon worship; emotional reactions; the moon of science.] Literature.

International Journal of Ethics. Vol. xiii., No. 1. **W. L. Cook.** 'Criticism of Public Men.' [Criticism improves the characters of statesmen by bringing the public standard of morality to the same pitch as that of private life.] **A. Fouillée.** 'The Ethics of Nietzsche and Guyau.' [A comparison and criticism.] **W. D. Morrison.** 'The Professional Criminal in England.' [A criticism of recent articles by Sir R. Anderson, with a plea for mild treatment of criminals.] **R. B. Perry.** 'The Practical Consciousness of Freedom.' [A vindication of free-will based on the practical conceptions of duty and responsibility. Belief in the reality of freedom involves belief in the reality of temporal change.] **A. E. Taylor.** 'Mind in Nature.' [An argument for the universal presence in the natural world of a conscious element which is not indifferent to man's ethical interests, as opposed to the mechanical view of exact science.] **Ida M. Metcalf.** 'The Pampered Children of the Poor.' [Strictures upon the methods and general spirit prevalent in the elementary education system of the United States.] Book Reviews.

REVUE DE MÉTAPHYSIQUE ET DE MORALE. No. 6. Novembre, 1901. **A. Fouillée.** 'Les deux directions possibles dans l'enseignement de la philosophie et de son histoire.' [The 'two directions' are (1) 'deterministic monism,' (2) 'indeterministic pluralism'; but M. Fouillée's classification seems extremely vague and arbitrary. He is himself a partisan of (1), which, he tells us, (*a*) is 'synthetic and conciliatory,' believing that reality has more 'sides' than can be exhausted by any system of 'concepts'; (*b*) believes that the laws of 'identity' and 'causality' have no exceptions: yet (*c*) to deny 'that there are intelligible reasons for a choice' is to deny 'the law of causality,' and (*d*) to believe in 'causality' is not to believe in 'fatal laws' or 'mechanical necessity'; on the contrary, 'the final question' is not between 'determinism' and 'contingence,' but between the true 'idealistic' and the false 'mechanical' determinism, the former holding that 'the internal foundation of all things is an ever-active will, intelligent or capable of becoming so, which tends to independence and liberty': indeed, M. Fouillée himself insists that by 'law of causality' he only means 'the principle of intelligibility, *under whatever form* it be represented,' (2) on the other hand, is identified with 'French criticism' and 'the so-called new "critique,"' to which M. Fouillée objects, (*a*) that 'it believes it can measure everything with its standard, which is the principle of contradiction,' and hence is 'narrow and exclusive'; (*b*) that it assigns 'primacy' to 'activity,' which is 'a confused and bastard notion'; (*c*) that hence 'it puts at the basis of knowledge' 'contingence,' which is 'another pseudo-idea, without any possible definition,' *and* is purely 'negative,' *but* of which the 'positive and true' part consists in the truth that there are 'infinitely more causes than we can see and conceive,' and that hence reality is 'determined' in other ways as well as 'by mathematical and mechanical necessities'; (*d*) that its 'irrationalism' leads to the immoral doctrines of Nietzsche.] **V. Brochard.** 'L'éternité des âmes dans la philosophie de Spinoza.' [Quotes passages from Spinoza tending to show that, although only the 'essence' of our souls is eternal, yet these essences are (*a*) distinct 'individuals' or 'persons' (M. Brochard identifies these terms); (*b*) 'conscious' and 'self-conscious' (M. Brochard scarcely distinguishes these points from (*a*) or from one another); (*c*) 'actual,' 'true' and 'real': in short, that the 'we,' whom Spinoza asserts to be eternal, differ from our present selves only by the absence of 'memory and imagination' and of 'existence in relation to a particular time'. This doctrine was influenced by Aristotle's, but differs from it, in that Aristotle's *νοῦς ποιητικός*, which is alone immortal, is not the 'form' of any particular body and hence is not the 'individual soul'; and this difference is due to the influence of Plotinus (through the 'Arabian scholastics'), who holds that each man differs 'specifically' (*κατ' εἶδος*) from every other, and hence attributes to each individual soul the eternity which belongs to each of Plato's 'ideas': this view of Plotinus involves his conceiving the universal 'soul' and 'intelligence,' in which, respectively, all these distinct 'souls' and 'ideas' are eternally contained, as 'infinite'—a conception of the Deity which neither Plato nor Aristotle thought possible, and which is of Jewish origin. Finally, Spinoza differs both from the Greeks and from Plotinus, under Cartesian influence, in that he denies soul to be a 'moving cause' of matter. There is reason to think that even Spinoza's God is 'a consciousness and personality'.] **C. Dunan.** 'Les principes moraux du droit.' [An article the utter worthlessness of which is sufficiently illustrated by its first section. I. begins by quoting from Leibniz a definition of 'droit' = 'rights' as distinguished from 'duty'; immediately tells us that this definition *only* expresses the distinction between 'what ought to be' and

'what is'; says that this latter distinction is universally recognised; identifies such recognition with the admission that 'reason,' as distinct from 'brutal fact,' is not an 'empty word' and does 'exist'; and finally concludes that 'as all possible theories of reason may be reduced to two, empiricism and idealism,' the problem 'what right is' admits of two and only two solutions, the empirical and the idealistic. In II. M. Dunan professes to show that 'Hobbes' theory' (taken as representative of empiricism) is untrue; but, since he identifies throughout the most obviously diverse propositions, it is impossible to discover precisely what he does hold to be untrue. In III. we find (in contradiction to I.) that 'empirical philosophy' is 'only acquainted with facts,' and hence naturally could not solve the problem. To demand a solution from idealism '*means*' that right is only an 'absolutely necessary' 'idea'; and the solution is that 'reason renders all persons, *quâ* persons, perfectly equal to one another'; *or* that 'right is unity and identity in God of all reasonable beings'; *or* that 'right is diversity but equality of persons before human consciousness'. IV. 'Right is not, but wishes to be,' and, for the attainment of its wish, it must (1) become 'definite' 'for each individual'; (2) 'find in the world of facts a force with the will and power to support it'. Condition (1) necessitates the substitution of 'positive' for 'ideal' justice, since the latter is 'impossible either to conceive or to realise'. The State fulfils condition (2); yet its legislative 'intervention' cannot be justified by its mere utility, but only by the fact that every one obeys it voluntarily, which is the case, since every one wishes 'social life,' and therefore also the obedience which is a means to it. V. War is not constituted by open violence but by any endeavour of two parties to secure incompatible objects 'without caring to observe justice, and when nobody can impose it on them'. Against Hegel's praise of war between nations is urged (*a*) that the better nation *might* be found not always to win; (*b*) that the argument 'war is justified as a means to the survival of the very qualities which cause victory in war' is a 'vicious circle,' and necessitates the inference that the utility of these qualities consists in the production of war, just as that of war consists in their production! Hence there should be an 'international institution' to enforce justice, although a 'peace imposed from without' might have ruinous effects! 'And besides' 'competition' is sufficient to ensure the 'pre-eminence of the best;' and is always 'kept within the bounds of justice'!] **A. Landry.** 'Quelques réflexions sur l'idée de justice distributive.' [A refreshing contrast to M. Dunan. Will only consider what principles ought to guide the State in the distribution of 'economic goods,' not *e.g.*, of honours, etc. I. Removes misunderstandings about the nature of the 'impartiality' which is essential to justice: different people must be treated in the same way unless 'a different treatment can be *justified* by the same principle' which justifies the general rule of treatment; a just 'equality' does not require that every one should be in the same circumstances, but only that, *if* they are, they should be treated alike. But this 'essential element' of justice is 'formal': it only tells us to apply *some* principle impartially; the question 'What principle?' may be answered generally by 'Promote the public good'; but this 'end' includes many different ends, and it is plain *a priori* that we can only decide *approximately* what method of distribution will best promote the whole. II. What end do the ordinary formulæ of distributive justice imply? These are: (1) To each in proportion to his services; (2) to each in proportion to the quantity of his labour; (3) to every man the same; (4) to each in proportion to his needs. (1) and (2) are mainly means of maximising the amount of 'economic goods' produced; whereas we tend

to hold (3), because we see that the wealth of the rich produces less 'well-being' than would the same amount distributed among many poor, and (4) because more wealth is necessary to produce the same sum of 'well-being' in some than in others, *i.e.*, both aim at that distribution of economic goods which is 'best in itself'. Thus the end implied in all four is 'to bring to a maximum that well-being which the enjoyment of exchangeable goods procures,' *not* the promotion of moral, intellectual or æsthetic excellence. The adoption of this end as the standard of distributive justice shows that it is regarded as the 'most important end'; and it is rightly so regarded, since it is both a necessary condition for, and itself (to some extent) inclusive of, the rest. III. That justice is commonly thought to require a different distribution from that which is of 'social utility' is due to its identification with what 'social utility' *would* require, if conditions were different (*e.g.*, if people were not generally lazy and selfish); and private may follow a different rule from public justice (*e.g.*, 4 instead of 1), just because it can see whether a particular man is an exception to these general conditions.] Études Critiques. Enseignement. Table des Matières. Supplément. 10e Année, No. 1, Janvier, 1902. **L. Conturat.** 'Sur la métaphysique de Leibniz' (Avec un Opuscule Inédit). **Xavier Léon.** 'La philosophie de Fichte et la conscience contemporaine.' **J. Wilbois.** 'L'esprit positif' (suite). Discussions. Enseignement. Supplément. No. 2. Mars, 1902. **J. J. Gourd.** 'Le sacrifice.' **H. Delacroix.** 'L'art et la vie intérieure.' **A. Landry.** 'La responsabilité pénale dans la doctrine utilitaire.' **H. MacColl.** 'Logique tabulaire.' Discussions. Études Critiques. Enseignement. Questions Pratiques. Supplément. No. 3. Mai, 1902. **H. Poincaré.** 'Sur la valeur objective de la science.' **F. Evillin.** 'La dialectique des antinomies kantiennes.' **Ch. Dunan** 'La division des devoirs.' **J. Wilbois.** 'L'esprit positif' (suite). Études Critiques. Questions Pratiques. Supplément.

Revue Néo-Scolastique. No. 30. **J. Halleux** ('L'Hypothèse évolutionniste en Morale,' *suite et fin*) resumes and completes his criticism of Mr. Spencer's account of the relation of evolution to morals. Mr. Halleux argues (1) that in grouping indifferently under the name of moral conduct all the actions of man and beast which tend to the conservation and development of life Mr. Spencer has lost sight of the true characteristics of morality; (2) that the law of evolution determining the parallel progress of structure, function and conduct is far from being as absolute as Mr. Spencer thinks; (3) that though it is true to say that man tends to happiness by an essential law of his being, Mr. Spencer has quite misapprehended the true import of this tendency; (4) that Mr. Spencer's strictures on those moralists who seek for the distinction of good and evil elsewhere than in the nature of things have no bearing on theological morality. He further criticises Mr. Spencer's considerations of conduct from the physical, psychical, biological and sociological points of view. **G. Legrand** ('La renommée posthume d'Alfred de Vigny') inquires into the causes which have led to the recent revival of interest in the writings of Alfred de Vigny. De Vigny was a romanticist and a realist, but, above all, he was a symbolist, and it is to the symbolical character of his works that the present revival is due. **M. De Wulf** ('Augustinisme et Aristotélisme au XIIIe siècle) refuses to pass the list of Augustinian elements in the earlier form of scholasticism as drawn up by P. Mandonnet, according to whom the absence of a formal distinction between philosophy and theology; the superiority of the good to the true, and the analogous superiority of the will to the intelligence in both God and man; the need of a special illumination from God for the accomplishment of

certain acts of mind, the positive actuality, though of a very low order, of *materia prima*—independently of all substantial information ; the presence in matter of the principles or seminal causes of things ; the hylomorphic composition of spiritual substances ; the multiplicity of forms and the individuality of the soul independently of its union with the body, more especially in the case of man's, were of Augustinian origin. Some of these doctrines had no place in the Augustinian system, while others were totally opposed to that system. **C. Plat** ('Dieu et la Nature d'après Aristote') indicates the excellences as well as the defects of Aristotle's conceptions of God and nature.

ZEITSCHRIFT FÜR PSYCHOLOGIE UND PHYSIOLOGIE DER SINNESORGANE. Bd. xxix. Heft 2. . **J. von. Kries.** 'Ueber die im Netzhautcentrum fehlende Nachbilderscheinung und über die diesen Gegenstand betreffenden Arbeiten von C. Hess.' [Reply to criticism: discussion of methods and restatement of result. The fact which forms the point of departure for the rod-theory (that "oftentimes lights, which under certain conditions—high absolute intensity and bright-adapted eye—appear alike may, under other conditions—small intensity and dark-adapted eye—appear totally different"), *i.e*, the unlikeness of the twilight-values of bright-equivalent lights, has been taken into account by the Hering school only for the trichromatic organ, where it is not striking ; they have neglected its importance for the dichromatic eye and the extreme periphery of the normal retina. Tschermak's explanation, even so far as he goes, is entirely unsatisfactory.] **C. Hess.** 'Weitere Untersuchungen über totale Farbenblindheit.' [The hypotheses put forward by von Kries in explanation of total colour blindness are not in accord with the facts. For (1) in uncomplicated cases there is no central blindness in the visual field. (2) There is a diminution of central sensitivity in the dark-adapted eye, as there is for normal eyes ; there is no such diminution in bright-adaptation. (3) There is no long after-effect of stimulation. (4) The defects of vision in bright illumination cannot be accounted for by a high degree of local adaptation and a long-continued after-effect. (5) The patients' dislike of light tells against von Kries. And (6) the course of excitation after momentary stimulation is the same (colour apart) for the totally colour blind as for the normal eye ; not two bright phases (von Kries) but three are seen.] **W. A. Nagel.** 'Erklärung zu der vorstehenden und einer früheren Arbeit von C. Hess über totale Farbenblindheit.' [The 'earlier work' is the paper 'Bemerkungen zur Lehre von den Nachbildern und der totalen Farbenblindheit,' *Arch. f. Augenheilk.*, xliv. Hess has misinterpreted and misrepresented von Kries' doctrines.] **A. Samojloff.** 'Einige Bemerkungen zu dem Aufsatze von Dr. E. Storch : Ueber die Wahrnehmung musikalischer Tonverhältnisse.' [Storch's statement that the memory-images of laryngeal adjustments are the substrate of all musical thinking is by no means new : *cf.* Lotze, Müller, Stricker, Stumpf. Storch's tone spiral had also been anticipated by Opelt, Drobisch and Mach.] Literaturbericht.—Not a very inspiring number! Heft 3. **M. von Frey** und **R. Metzner.** 'Die Raumschwelle der Haut bei Successivreizung.' [Where the separate excitation of single pressure points is possible, adjoining points can always be recognised as different, under suitable conditions of experimentation, with successive stimulation. Discrimination is a function of the intensity of stimulus, and also of the interval elapsing between the two applications ; it is easiest when this interval is about 1⅓ sec. It cannot depend on local signs, in Lotze's sense, since the given difference is always qualitative ; localisation may be based upon this qualitative distinction, but is more difficult and uncertain.

We must therefore assume 'recognition marks' as prior to 'local signs'. The limen of direction (the least distance between stimuli that gives a certain judgment of their relative positions) is about twice as large as the successive limen.] **E. von Oppolzer.** 'Grundzuge einer Farbentheorie. I. Allgemeine Grundlagen.' [(1) All our colour sensations are resultants of the fusion of at least two 'elementary sensations,' corresponding to an excitation of a single opticus fibre. The elementary sensations are not colour sensations (like the red, green and violet of the Helmholtz theory), but brightnesses. Their fusion gives differences of intensity and of composition; and these differences (*cf.* timbre in the tonal sphere) condition our actual colour sensations. Three such elementary sensations are adequate to account for the phenomena of colour vision. Colours are most saturated when the intensities of the three elementary sensations are as 1 : 2 : 3 (in dichromatic systems, when the two intensities are as 1 : 2). They thus owe their existence to an 'innere Gegensätzlichkeit' of the three elementary intensities. (2) Colour perception: an attempt to correlate the three elementary sensations with structural differences in the outer members of the cones. (3) Fechner's Law: derivation of Fechner's constant; influence of the idioretinal light; relation of intensity of a mixed light to the intensities of its components.] **J. Volkelt.** 'Der æsthetische Werth der niederen Sinne.' [We must distinguish between the sensations which constitute the æsthetic object, and those which belong to the subjective attitude of æsthetic enjoyment or appreciation. We must distinguish also between sensations actually present, and their reproductions. How far, now, do real sensations from the lower senses constitute or help to constitute the æsthetic object? Opinions differ widely. It is clear that sight and hearing have two great advantages: they are less material, their stimuli do not directly involve a knowledge of bodily affection; and they are sharply grouped, definitely and significantly arranged. Can the lower sensations, which lack these advantages, still play any part in the æsthetic impression? Smell can, in natural and in artistic beauty (flowers; the artistic arrangement and decoration of a hall for a spring festival). Taste can, in natural beauty (the taste of fruit in an orchard); and so can temperature. Touch,—perhaps; but only exceptionally. Finally, reproduced sensations from the lower senses have three functions: as constitutive of the sensory aspect of the æsthetic object, as associatively connected with the visual or auditory presentation of the object, and as factors in the subjective experience induced by the object.] Literaturbericht.

Zeitschrift für Philosophie und Philosophische Kritik. Bd. cxx., Heft 2. **Jul. Bergmann.** 'Ueber den Begriff der Quantität' (Schluss). [After defining in a former article all quantities whose magnitude can be numerically determined (both continuous and discrete) as 'numbers of things,' Bergmann subjects to a searching criticism a doctrine of Kant's which might be quoted against him. He then proceeds to consider in what sense his definition is applicable to certain categories of quantity where at first sight it seems inadmissible: intensity of quality, velocity and acceleration, probability, and the curvature of lines. All these are quantities since they admit of more or less; but how can they be called numbers of things? A line is made up of shorter lines, a surface of smaller surfaces, a weight of lesser weights, but red of a certain degree of saturation cannot be analysed into less saturated reds, nor a given velocity into slower speeds, etc. The solution is that the total amount is a sum of differences, of degrees measured from a zero-point which though counted as = 0 may be in itself a very positive thing, as, for instance, the state of absolute rest from which degrees of velocity are counted is by no-

means a negative notion.] **E. Schwedler.** 'Die Lehre von der Beseeltheit der Atome bei Lotze' (Schluss). [In the evolution of his metaphysical philosophy, Lotze tended more and more to drop the doctrine of animated atoms in favour of a theory which interprets all phenomena as connected energies of the Absolute, retaining the former, if at all, merely as an ornamental adjunct to his system.] **Jonas Cohn.** 'Hegel's Aesthetik.' [Written from a neo-Kantian point of view. Hegel's æsthetic is considered both in relation to the works of his predecessors, and to the rest of his system. Things only appealed to Hegel in their completed form, and so his admiration is reserved for perfect classic art. And he looks on art as a whole merely as a transitional stage in the realisation of the Idea. Hence his inability to appreciate at their full value the works produced since the end of the Middle Ages.] **A. Goedeckemeyer.** 'Der Begriff der Wahrheit.' [Truth is what, under proper conditions of judgment, we cannot but believe. And the proper conditions are that we should eliminate emotional elements, that we should not use words without a distinct consciousness of their meaning, and that we should employ all the means of investigation available.] **Klem. Kreidig.** 'Ueber den Begriff der "Sinnestäuschung".' [Every sense-perception experienced is spontaneously referred to an external reality with certain definite determinations of which it is believed to correspond. These are quality, intensity, and position in space and time. Hence is deduced a fourfold classification of illusions of sense according to the errors committed with regard to one or other of these four determinations. Aristotle was right when he interpreted illusions of sense as errors of judgment.] **K. Vorländer.** 'Kant's Briefwechoel, 1789-1794.' [Extracts from the newly published second volume of Kant's correspondence, which contains ninety letters from and 202 to the philosopher. The details are of little more than bibliographical interest.] Recensionen, etc.

Philosophische Studien. Bd. xviii., Heft 2. **R. Seyfert.** 'Ueber die Auffassung einfachster Raumformen.' [A study of the subjective factors in our estimation and reproduction of triangles was published in volume xiv. The present paper deals with the objective factors, with the following results. (1) A strong and clear contour line is a favourable condition. It assists other favourable conditions (colour upon white background) and can compensate unfavourable (too great distance, small difference of brightness between ground and figure). (2) Correct apprehension is possible without contours, if the angle-points of the triangle are marked. In certain cases, the strain of attention which these dot-figures call for renders their reproduction more accurate than that of the drawn triangles. In all cases strong marking of the angle-points compensates the disadvantage of weak contours. (3) Size and distance of the triangles must be so regulated that the whole figure falls within the yellow spot. Reproduction is at its best when figure and yellow spot are practically coincident. The spatial sensitivity of the retina is greatest within a circumscribed region of the yellow spot; less for points lying the one within and the other without the spot; least for two points lying outside of it. (4) Coloration of the figures is, in general, a favouring condition of their reproduction. Direct colour contrasts are, however, unfavourable. And the brightness-difference of field and figure is always more important than the colour quality of the latter: it remains effective at distances and in illuminations where the colour influence has disappeared. (5) Insufficient illumination is an unfavourable condition: so is (6) fatigue. (7) Æsthetic pleasure enhances accuracy of reproduction, and conversely. The errors show three uniformities: (*a*) a

shortening of the lines of the figures; (*b*) a tendency to errors of the same kind; (*c*) preference for some forms, to the neglect of others. We cannot here enter into the author's explanations of these laws.] **E. Duerr.** 'Ueber das Ansteigen der Netzhauterregungen.' [The results of Exner and Kunkel are not completely concordant; and there are obvious objections to the methods of both observers. Especially must one take account of adaptation. (1) Experiments with Dark Adaptation.—Series of experiments with moving stimuli (slits in a revolving black cylinder) gave no result. The arrangement finally employed was, in brief, as follows: the normal stimulus, exposed for more than the time necessary to reach its intensive maximum, was varied by means of an episcotister; the stimulus of comparison was varied in duration, by change of length of slit in a revolving drum. Since the brightness relations of the stimuli were known, it was only necessary to give the stimulus of comparison such a duration as should make it just equal in intensity, subjectively, to the standard: this duration gave the time required for the intensive rise of the sensation. With colourless stimuli, of the intensity employed, this time of rise was 0·266 sec. Coloured stimuli were obtained by gelatine plates and (yellow) by a 'filter'. The times of rise (although the stimuli were so dark as to be practically colourless for the observer) were: red, 0·541 sec.; blue, 0·543 sec.; yellow, 0·573 and 0·541 sec.; green, 0·541 and 0·691 sec. (the latter value is suspicious). Control experiments with colourless light gave 0·266 and 0·272 sec.. the same value as before. (2) Light Adaptation.—The standard stimulus was again regulated by an episcotister; the stimulus of comparison (intrinsically weaker) had its duration varied by varying sections in the periphery of a rotating disc. Results: white light, 0·269, 0·253, 0·271 sec.; weaker stimuli, 0·288 sec.; red, 0·519, 0·535, 0·546 sec.; green, 0·529, 0·519, 0·533 sec.; blue, 0·523, 0·496, 0·521 sec.; yellow. 0·534, 0·497 sec. (For green, blue and yellow the method was slightly modified.) We find, then, as before, a remarkable constancy for the different kinds of homogeneous light, and a marked difference between the times of intensive rise with coloured and colourless stimuli. The coincidence of the times in dark and light adaptation must be explained on the assumption that the time of rise does not change with change in the intensity of stimulus. (3) This assumption is further justified by the results of new experiments with dark adaptation, made with the stimuli of the last series, which were much stronger than those of the first dark series. Finally, the maximal effect that a stimulus can produce, under different conditions, may be calculated from the fact that the stimulus of comparison that can appear equal to a given standard in dark adapation is 2·75 times as small as that which is judged equal to the same standard in light adaptation, if the stimulation be cut short at the time required for the arousal of the sensation maximum. The author ends with an explanation of the discrepancies between his own results and those of his two predecessors.] **F. S. Wrinch.** 'Ueber das Verhältniss der ebenmerklichen zu den übermerklichen Unterschieden im Gebiet des Zeitsinns.' [Record of experiments (chiefly with times 'filled' by a tuning-fork tone) and theoretical discussion. The principal results are as follows. (1) Work with mean gradations offers no confirmation of Weber's Law; the relative deviation from the geometrical mean increases, for all observers, with increase of the ratio of the two given time-stimuli. On the other hand, minimal change confirms Weber's Law for times between the limits 0·25 and 1·20 secs. This relation between the two methods agrees with the results of Merkel and Ament in the sphere of intensity. (2) The difference limen, for the times indi-

cated, is about 4·5 per cent. (3) Tone-filled times, of the lengths mentioned, show nothing analogous to an indifference time. The error of estimation is always positive, and increases with increase of the normal time. This fact is connected with the other, that Weber's Law shows no lower deviation. The relative difference of estimation is minimal for times from 0·8 to 1·2 secs. (4) Heymans' law of inhibition is inadequate to the results with mean gradations. These results support Kuelpe's conjecture that just noticeable differences increase with the intensity of the limiting sensations, and admit of its extension to temporal comparisons. (5) There is a tendency, in the 'time sense,' to take absolutely equal differences to be equally large. The mid-times of the later series correspond approximately to the arithmetical mean of the limiting times, and there is no evidence of an influence of the position of the time-differences judged.] **O. Kuelpe.** 'Zur Frage nach der Beziehung der ebenmerklichen zu den übermerklichen Unterschieden.' [Detailed reply to the criticism of Lehmann (Die körperlichen Aeusserungen psychischer Zustände, ii., 105) upon the work of Ament (*Philosophische Studien*, xvi.).]

Archiv für Systematische Philosophie. Neue Folge. Bd. viii., Heft 4. **U. K. Twardowski.** 'Ueber Sogenannte Relative Wahrheiten.' [The distinction between relative and absolute truth applies only to the outward form in which judgments are expressed. The judgments themselves are either always and unconditionally true or not true at all. All truth is absolute truth.] **D. Koigen.** 'Einsamkeit.' [Examines the various forms and conditions of the spiritual isolation of the individual from the society in which he lives. Special account is taken of the conditions prevailing at the present time.] **W. Smith.** 'What is Knowledge?' ["Knowledge of the self is given in every part of Conscious experience, and knowledge of the not-self, when it is possible, is given in the reproduction of the experience of the not-self."] Bd. ix., Heft 1. **R. Holzapfel.** 'Wesen und Methoden der sozialen Psychologie.' [Sociology which deals with the relations of social groups must ultimately be founded on the psychology of the relations between individual men leading to an investigation of the way in which *ideals* are formed and transformed.] **Berthold Weiss.** 'Gesetze der Geschehens.' [The "laws" referred to are of the sort which Spencer formulates in his *First Principles*.] **A. Marucci.** 'Saggio Critico della Dottrin della Conoscenza.'

Vierteljahrsschrift für Wissenschaftliche Philosophie und Sociologie. Jahrgang xxvi. Neue Folge. Heft 4. **Hermann Götz.** 'War Herder ein Vorgänger Darwin's?' [Shows that Herder did not anticipate any of the specially characteristic points of the Darwinian theory.] **S. R. Steinmetz.** 'Die Bedeutung der Ethnologie für die Soziologie.' [Ethnology is far the most important and trustworthy source of sociological data.] Besprechungen, etc.

Philosophisches Jahrbuch. Bd. xv. Heft 2. **St. Schindele.** 'Die Aristotelische Ethik.' [This is the first of a series of papers in which the writer examines the principles of Aristotle's ethics in view of other systems, both ancient and modern. He considers Aristotle to have erred in positing happiness as the last and highest end of man, and St. Thomas does not succeed in showing that his meaning is in harmony with Christianity.] **Hermann Sträter.** 'Ein modernes Moralsystem.' [The writer continues to attack Wundt's idea of morality. *Will* is not mere consciousness, not a mere intellectual process. The idea of Right, the categorical imperative, demands an *imperans*. There is a development

of morality through the ages; but there is not a double morality, right at one time, wrong at another, or right for one man (a genius) and wrong for another.] **Ch. Willems.** 'Die obersten Seins-und Denkgesetze.' [The author concludes his series of papers by saying that the axioms of identity, contradiction, excluded middle, and sufficient reason, are true for all things; that of causality, only for things which become. But all have objective worth, depending, not upon subjective inability to think otherwise, but upon objective evidence.] **Gregor v. Holtum.** 'Thierisches und menschliches Erkennen.' [The writer, in conclusion, follows Wasman's detailed refutation of Ennery's (and of others') arguments in favour of the intelligence of brutes, and praises his book as a strictly scientific work, which lays fetters upon the irrelevant vagaries of fancy.]

Rivista Filosofica. Anno iv., vol. v., Fasc. iii. May-June, 1902. **G. Vidari.** 'Civiltà e Moralità.' [Civilisation understood as intellectual and material development is, notwithstanding some serious drawbacks and dangers, on the whole favourable to morality, chiefly by widening men's conceptions and enlarging their sympathies; while morality is indispensable to civilisation.] **G. Gentile.** 'L'unità della scuola secondaria e la libertà degli studi (continuazione e fine).' [Concludes an animated plea for maintaining a high and uniform standard of secondary education. Culture is essentially aristocratic and should not be degraded to meet the demands of a materialistic democracy. Among other subjects it should include some acquaintance with the New Testament, a subject of which, according to this writer, nearly all educated Italians are lamentably ignorant.] **C. Cantoni.** 'Studi Kantiani.' [Maintains, chiefly against Wartenberg, that Kant's 'thing-in-itself' is no objective reality, but a limiting conception, a purely subjective necessity of thought.] In the Rassegna Bibliografica of this number there is a lengthy adverse criticism of Mach's 'Analyse der Empfindungen' (third ed.) from the pen of F. Bonatelli. Vol v., Fasc. iv. September-October. 1902. **G. Vidari.** 'Gaetano Negri.' [Negri represented a whole generation of Italian thinkers who, while rejecting Christianity, came to no clear conception as to the part reserved for it in the future.] **B. Varisco.** 'Pensiero e realtà.' [A rapid summary of Renouvier's metaphysics, to be followed by critical remarks in a future number.] **A. Pagano.** 'La teoria della pena nell' Etica di G. Wundt.' [Expounds with general approval Wundt's theory of punishment, according to which its essential object is to redress the wrong done by the infliction of a corresponding pain on the criminal.] **E. Sacchi.** 'Le idee di Brunetière sulla Tragedia.' [Chiefly about the idea of fate in Greek and French tragedy.] **A. Faggi.** 'Un libro di estetica.' [A few brief adverse remarks on Croce's æsthetic theory.] Rassegna Bibliografica, etc.

VIII.—NOTE.

MIND ASSOCIATION.

THE following gentlemen have joined the Association since the printing of last number :—

ADAM (J.), Emmanuel College, Cambridge.
SMITH (Norman), 58 South Woodside Road, Glasgow.

Those who wish to join the Association should communicate with the Hon. Secretary, Mr. HENRY STURT, 5 Park Terrace, Oxford; or with the Hon. Treasurer, Mr. F. C. S. SCHILLER, Corpus Christi College, Oxford, to whom subscriptions should be paid.

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MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

I.—THE PHYSIOLOGICAL FACTORS OF THE ATTENTION-PROCESS (II.).[1]

By W. McDougall.

The Waking State as a Condition of Attention.

The mind is not always equally ready to react to impressions from without or to follow attentively its trains of ideas. From hour to hour and from moment to moment its degree of awakeness and alertness varies widely. At the zero-point of the scale of degrees of awakeness is the state of deep and dreamless sleep in which consciousness and attention are absent or at a minimum. At the other end of the scale stand those rare moments of exaltation when, through some happy conjunction of internal and external conditions, the whole being, senses, intellect and emotions alike, seems to be raised to a higher plane of activity than the normal. 'Tis then we perceive new features in long familiar scenes, and objects long well known to us become strangely beautiful or significant, while the mind seizes with a joyful sense of power and ease the ideas that rise in a free and rapid stream. Between these extremes a large but indefinite number of degrees of awakeness might be distinguished. Very low in the scale stands the state of ordinary dream-consciousness. In my own case a dream usually consists of a series of visual images loosely and somewhat inconsequently grouped and having a certain low degree of emotional colouring.

[1] For Part I. *cf.* Mind, N.S., No. 43.

Selection and concentration are not entirely absent, but are carried to a low degree only, one or other figure or part of a scene may predominate over the rest, but it remains ill-defined and its parts are not discriminated; it is as though the scene were viewed by an eye, which, though capable of movement, lacks a region of acutest vision. Attention must, I think, be admitted to be present, but in its lowest, most rudimentary form. Whether Attention is ever completely absent during the waking state is a disputed point, but certainly it may be of a very low grade only, as when one lies dozing in a warm bed after being roused from sleep. Occasionally one experiences a rapid transition from the state of profound sleep to a state of maximal attentional activity. I will first trace such a transition in terms of consciousness and bodily changes and then describe what I take to be the nature of the nervous changes underlying it.

During the small hours of the morning while I am lying in deep dreamless sleep, the stillness is broken by some unusual sound of moderate intensity arising within the house and repeated at short intervals. This commotion falls upon my auditory apparatus several times without provoking any response, whether in the form of movement or of affection of consciousness. On a further repetition of it my limbs make some aimless movements or I roll over in bed, and this, I think, is apt to occur before consciousness is at all affected. On looking back on the course of these events when fully awake, it appears that the auditory stimulus first affected consciousness as a pure undiscriminated sensation of sound having no objective reference; there was no attention to the sound and there was also, at this stage, complete absence of self-consciousness. On further recurrences of the sound consciousness is further aroused and its state may be represented by the phrase 'There is a noise,' and perhaps at the same time I become aware, through a dim retrospection, that this noise has been going on for some time. There is the minimal degree of Attention, a vague discrimination of the noise as such and a dim objective reference, together with a dawning self-consciousness that is the necessary correlate of this objective reference; and the whole state has a faintly disagreeable affective tone. If I were lying at an hotel it might well happen that further repetitions of the noise would fail to arouse any higher degree of consciousness or attention, and that I should presently fall asleep again in spite of recurrences of the noise, for under those conditions it would be for me a meaningless noise. But if I am lying in my own house further repetitions of the noise produce

further effects. With the dawning self-consciousness comes a sense of my surroundings and the 'There is a noise' passes into 'What is that noise?' with the stronger disagreeable affective tone, 'That ought not to be'. This implies a distinctly more attentive state than that of the preceding stage, and this is expressed by the greater tension of the muscles generally, perhaps also a raising of the head from the pillow and a setting of the muscles of ear, head and neck. Again the noise is repeated, and now comes like a flash, 'There's some one in the house'. The coming of this idea results in an immediate increase of Attention, clearly expressed in motor terms by my sitting up in bed with all the body set to an intense listening, while visual ideas of the spatial relations of the house become vivid as I try to refer the sound to this or that part, and at the same time my more rapid breathing and pulse indicate a considerable increase in the degree of emotional excitement. Once more I hear the noise and, listening intently, with all my muscles tense, with deep and hurried respirations and thumping heart, I rise to open the door as softly as possible and take measures for the defence of my property. Attention has reached the highest degree that this stimulus, in this particular set of circumstances, is capable of arousing.

In this experience, which with slight variations must be more or less familar to almost all householders, we have a good illustration of the fact that the degree of Attention, that can be aroused by any object or stimulus, is to a large extent dependent upon the degree of awakeness at the moment of the incidence of the stimulus. For we have a series of states of successively higher degrees of Attention brought about by the repetition of one simple sensory stimulus, each incidence of the stimulus arousing a higher degree of Attention than its predecessor, because that predecessor has brought the mind to a more fully waking state.

We see further that the increase of attentive activity is brought about by the co-operation of the four factors that are the chief, if not the sole factors, in all such cases of rising Attention, namely :—

1. Sensory stimuli, which in the above case, although not violent, are nevertheless potent in arousing Attention in virtue of their relative novelty and of the contrast between them and the intervening periods of silence.

2. Muscular adjustment, beginning in this case with vague aimless movements and culminating in complex strenuous activity of pretty well the whole muscular system, directed and co-ordinated to a particular end.

3. The excitement of complex and well-developed mental systems connected with the necessity of expelling an intruder and defending my property.

4. An emotional excitement due to the affective tone of the ideas aroused and having its basis in the instinct of defence of self and belongings.

This series of states of increasing awakeness and of rising attention must now be described in terms of the physiological scheme that I have proposed in the first part of this essay. While I lie with closed eyes in a warm soft bed in a dark and quiet room, the sum of physical stimuli affecting the sensory endings of the afferent nerves is very small. The amount of 'neurin' generated in the afferent neurones per unit of time is therefore so small that it is insufficient to make good the loss by leakage into the muscular system that is continually going on in all parts of the nervous system. During the day fatigue-products have been accumulating in the blood, and these act upon all the synapses, the junctions of neurones, of the nervous system, to increase their resistance, to raise their thresholds, just as do ether and chloroform when present in the blood, and, like these drugs, they act with most effect upon the least organised synapses, those of the highest levels.[1] Hence there is low pressure of neurin in all the afferent neurones, and a high degree of resistance in all the paths by which it tends to escape into the efferent neurones and the muscles. The pressure of neurin is therefore insufficient to keep open any path or paths through the higher levels, or indeed any paths but those most thoroughly organised chains of neurones that constitute the reflex paths through which the activity of the fundamentally vital viscera, the heart and lungs, is regulated. All neurones, with the exception of these last mentioned, are therefore as nearly at rest as living cells can be, their metabolism, or rather their katabolism, is minimal, and therefore the amount of neurin set free in them is minimal, and, excepting these few fundamental reflex arcs, there are no paths discharging into efferent neurones; the skeletal musculature is therefore motionless and there is no consciousness. Further, the amount of neurin set free in unit of time is less than can escape by leakage, hence the charges of neurin in the individual neurones is

[1] Of these two conditions, which I take to be the two principal determinants of normal sleep, the latter is probably the more important during the early hours of the night and the former during the later hours as fatigue passes off.

drained to its lowest ebb, *i.e.*, their tonus is low, and therefore that of the muscles is also low, body and limbs lie limp and flaccid.

Such is the condition of the nervous system during deep sleep. When, as in the case described above, stimuli of moderate strength fall at short intervals upon the sensory ends of one or other set of afferent neurones of a nervous system in this condition, they may fail to evoke any response, whether as consciousness or as movement, until after a considerable number of repetitions. A familiar instance of this delayed response is the gradual waking of a sleeper by a gentle, oft-repeated knocking on his door. The earlier stimuli, which fail to produce any directly ascertainable effect, are yet not without effect, for it is by the summation of their effects that the nervous system is gradually brought into such a state that a further repetition of the stimulus may cause a reflex movement. A similar summation of effects has been shown to occur in the waking state in the case of sensory stimuli of minimal strength, as also in the isolated spinal cord. In the case in hand, it would seem that the neurin liberated in the auditory afferent neurones fails at first to discharge through any reflex lower-level path because it is absorbed and rendered latent or invisible, as we may say, in raising the tonus of those neurones, and also, no doubt, because at first part of it drains rapidly away into other systems of neurones with which they are connected on all sides, thus serving in some degree to raise the tonus of all or of a considerable mass of neurones of the lower-level systems. And this goes on until the tonus of the directly stimulated neurones is so far raised that a repetition of the stimulus determines a discharge through some purely reflex lower-level path into some group of muscles.

Then at once a great step towards the waking state is made, for the contraction of the group of muscles, thus reflexly excited, stimulates the afferent nerves of these muscles and their associated structures, tendons, joints, ligaments and so forth, and the movement, being the occasion of friction and new relations of pressure between parts of the skin and the bed and bedclothes, causes indirectly stimulation of the sensory nerves of those parts of the skin. The reflexly produced movement therefore determines a rapid setting free of neurin in a considerable number of afferent neurones, the quantity being in proportion to the extent of the movements and the mass and number of the muscles involved. This increment of neurin will to some extent diffuse itself through the neurones of the lower-level systems and

raise the general level of their tonus to a corresponding extent.[1]

If the external sensory stimulus, in this case the noise, be a very powerful one, a single incidence of it may suffice to bring about the state just described, and the feebler it is the more frequently will it have to be repeated before it can effect this degree of change of state in the central nervous system; just as, in the case of an animal deprived of the brain but with spinal cord intact, a sensory stimulus of only moderate strength must be repeated several times before it can excite a reflex movement, and can excite such movement through a single incidence only if it be of very violent character.[2] A similar cumulative effect of apparently ineffective or sub-minimal stimuli has been shown by Urbemtstisch to occur in the fully waking state when auditory stimuli of very low intensity are used. These cases of summation of effects of successive and separately ineffective stimuli are instances, I take it, of that important effect specially studied by Exner,[3] and by him named facilitation (*Bahnung*). I have already in another place attempted to show that this may be regarded as essentially a process of accumulation in neurones of successive charges of neurin individually insufficient to bring the potential of the neurones up to the discharging point.[4]

The description of this first step of the awakening process, which brings us to the reflexly produced movement, presents no difficulties. But we have now to face the first of those four problems formulated at the end of the first part of this essay,[5] namely, ' Why is it that at any moment the excitation set up in the lower levels by some one of numerous simultaneous sensory impressions penetrates to and excites an organised system of paths in the higher levels of the brain? Why is the excitation-process not confined to lower-level paths of which the normal or resting resistance is lowest?' In the instance in hand, Why does the excitation-process, set up in sensory neurones by the auditory stimulus, not

[1] Many persons and animals habitually stretch themselves on waking from sleep, powerfully innervating all their skeletal muscles, and this, as most of us know from our own experience, promotes very effectively the waking-process. It would seem that we share with the animals this instinctive tendency to secure in this way a rapid raising of the general tonus of the nervous system.

[2] Sherrington, Art., " Spinal Cord," Schaefer's *Text-book of Physiology*, p. 828.

[3] *Entwurf z. physiolog. Erklärung psychischer Thatsachen.* Wien, 1894.

[4] *Brain*, Dec., 1901. [5] MIND, No. 43, p. 349.

continue at each recurrence of the stimulus to discharge itself through purely reflex paths of level i., but instead penetrates to and excites a path of level ii., the sensory reflex level, so determining the undiscriminated sensation of noise?

Now we know from physiological experiments on animals deprived of the brain that the reflex paths of the cord, paths of level i., are of limited capacity, *i.e.*, they are incapable of transmitting an excitation of more than a very moderate intensity.[1] For on stimulating any given set of afferent nerves it is impossible to obtain reflex contractions of more than a moderate force and, when the sensory stimulus is increased in strength beyond the degree that suffices to bring about such contractions of moderate force, there is no further increase in the force of the contractions of the group of muscles first excited, but other muscles are set in motion. It would seem that the excitation-process overflows its most direct reflex path, the path of forward conduction of lowest resistance, and so spreads laterally to other paths of the same level with which it is connected by synapses of a normal resistance higher than that of the synapses connecting together the neurones of the direct path.

In the intact nervous system the spread or overflow of the excitation-process would seem to take place upwards into paths of higher level rather than laterally into other paths of the same level, and in the case in hand, the spreading of the excitation-process from paths of level i. to the paths of level ii., in which it determines the sensation of sound, may be regarded as due to overflow of the excess of neurin that cannot escape to the muscles by the lowest level path of limited conduction-capacity. Here, as we shall find in other instances, a hydro-dynamic analogy will serve to make clear the state of affairs that seems to obtain. Imagine a vessel having a single large inflow pipe and a series of smaller discharge pipes all opening about its base and leading from it to other vessels, and imagine these discharge pipes to be controlled by spring valves of different degrees of resistance. This vessel standing almost empty may represent the central nervous system during deep sleep; water dribbles into it so slowly that a small leakage about the valves prevents the accumulation of sufficient pressure to open the valve of lowest resistance. Then comes a series of gushes of water through the inflow pipe. At first the result is merely a rise of the level of the water in the vessel and a correspondingly

[1] Sherrington, *op. cit.*, p. 831.

increased leakage through all the valves. Then after a certain number of gushes the water in the vessel will reach such a level that its pressure overcomes the resistance of the weakest valve, which therefore opens and allows the passage of a stream of water. If now the amount of water coming in at each gush be so great that it cannot at once be carried away through the valve of lowest resistance, the level of the water will rise with each of the inward gushes in spite of the opening of that valve until the pressure suffices to open one or more of the valves of higher resistance, when overflow into the corresponding vessels will occur. The valve lowest in order of resistance represents the synapse or synapses of the reflex path of level i., the valve next in this order represents the synapses of the corresponding path of the sensory-reflex level, and the others various other junctions with paths of these two levels.

The outflow through paths of levels i. and ii. is not confined to the motor nerves of skeletal muscles only, but finds its way in part to the efferent nerves of the viscera, increasing the tonus and contractions of arterioles, heart, lungs and perhaps other organs. During sleep these organs have been kept in a state of gentle regular activity, through a circular process of self-control; their movements initiate an excitement of their sensory nerves which propagates itself through reflex paths of the cord and bulb and out along efferent nerves as a series of impulses which, returning to the same viscera, determine the initiation of a fresh afferent influx. On the incidence of the series of auditory stimuli this self-maintaining circular process is complicated and disturbed by a new series of efferent impulses, and the resulting changes in the visceral movements determine an increased afferent inflow which, as in the case described above, no longer finds a sufficient outlet through the reflex paths and therefore overflows to higher-level paths lying chiefly in the prefrontal cortex. The excitement of these paths is the physical basis of those obscure affections of consciousness from which the idea of the self is synthesised. So self-consciousness is aroused, and, owing to previous similar experiences, it takes the form of the idea of self-lying-in-bed, and this idea is intimately associated with that of the bedroom and the house in their spatial relations. Hence the excitement of those prefrontal paths, which determines the rise of self-consciousness, leads on to the excitement of that mental system or complex system of paths which is the physiological basis of the idea of the self-in-bed-in-my-own-house. These upper-level paths, being thus centrally excited, become paths of low resistance and therefore, when next

the sensory stimulus falls upon the auditory neurones and sets free a further quantity of neurin in paths of levels i. and ii., this overflows in part into these higher-level paths and the mental system of the idea of self-in-house apperceives the sound, converting the undiscriminated sensation of sound into the percept, a-noise-in-my-house-at-night. This is a percept that has a large affective value, for it leads directly to the excitement of the mental system that subserves the instinctive tendency to defence of self and belongings and which physiologically consists of numerous paths leading to widespread activity of both visceral and skeletal muscles. The contractions of these numerous groups of muscles determine a great influx of neurin to the afferent side of the nervous system, which influx brings about that general condition of raised tonus and widespread nervous activity which we feel as a state of emotional excitement. Then at last the whole nervous system is thoroughly awake; the neurones of all levels and all parts are fully charged so that any slight stimulus will cause their discharge: the excitation-process spreads freely from one system of upper-level paths to another, ideas as to what action must be taken flow rapidly and action follows; conation and attention are at a maximum.

The conjunction and interaction of the two systems of excitement, that of the mental system of the idea of self-in-house and that directly set up by the recurring sensory stimulus is the essential condition of the culmination of the process. On the one hand, if the stimulus does not recur at this stage the whole excitement will die down, the accumulated charges of neurin will drain slowly away, the high degree of tonus of neurones and of muscles subsides, the viscera resume their gentle regular activity and sleep is restored. On the other hand, in the absence of the conditions that bring up the idea of self-in-my-own-house, if for example I am lying at an hotel, this idea will not arise or, if it arises, is quickly suppressed and replaced by the idea self-in-hotel, and the sound is then perceived as noise-in-hotel. This perception has no such emotional value as the other, it does not lead to any instinctive excitement of visceral and skeletal muscular systems; hence there results no such free liberation of neurin in large groups of afferent neurones as occurs in the other case. And in the absence of this the nervous system adapts itself to the recurrent sound, *i.e.*, the excitation-process initiated by it fails to propagate itself through any wide system of upper-level paths, but becomes confined to a comparatively narrow set of lower-level paths.

In the foregoing sketch of the series of changes constituting the transition from the state of sleep to one of fully waking activity there is implied the view that the maintenance of the waking state depends upon the maintenance of a certain high degree of tonus throughout the neurones of the lower levels of the nervous system; and further it is implied that this in turn depends upon a constant liberation of energy or, as I prefer to call it, neurin, in considerable groups of afferent neurones, under the influence of peripheral stimuli.[1] This view is based on the characteristic differences of the states of sleeping and waking in the normal human being, and on the observed influence of stimuli to the peripheral nerves, and of the lack of such stimuli, in favouring the transition from the one state to the other as traced above, and it receives confirmation from the consideration of such abnormal cases as that reported by Strümpell.[2] In the case of this patient one eye and one ear remained the only sensitive organs, all other parts were anæsthetic, and whenever all stimuli were cut off from these two organs the patient always fell asleep in less than two or three minutes and could then only be wakened by flashing a bright light into his sound eye, or by repeatedly calling his name into his sound ear.

It is further implied in the above account that we may regard all the neurones of the afferent side of the waking nervous system as constituting, in virtue of their interconnexions, a reservoir of energy, as containing a common stock of neurin upon which the various parts draw in turn as they become active, *i.e.* as they become in turn the principal paths of conduction from afferent to efferent side. And it would seem that, while the maintenance of a certain degree of pressure or potential is a necessary condition of the waking state, the degree of mental activity at any moment is more or less dependent upon and varies with the degree of this pressure, and therefore dependent upon a continual peripheral stimulation of afferent neurones of the organs of sense and of organic sensibility. It would seem in fact, that, so far from sensory stimuli being detrimental to activity of the higher levels of the brain, all peripheral stimuli promote mental activity so long as they are not powerful enough to attract attention to themselves. That mental activity is favoured by the incidence of a large volume of sensory stimuli of a kind that does not powerfully

[1] The over-excited brain which, in spite of fatigue and of the withdrawal of all but inconsiderable sensory stimuli, continues active and waking, is in an abnormal and semipathological condition, and is therefore an exception to the rule and does not call for consideration here.

[2] *Deutsches Archiv f. klin. Medizin.* Bd. xxii.

attract attention to itself is a fact that has not escaped the notice of psychologists. Thus Dr. Stout writes: "Dead silence and monotony of colour in the environment are in my own case very unfavourable conditions [for mental work]. The sound of running water, a well-lighted room, a variety of objects in it, an open window with a pleasing prospect are very favourable conditions, even though I take no notice of them."[1] And the favourable effect of gentle muscular exercise, such as walking, has been frequently remarked.

But the most valuable evidence in support of the view I am suggesting is afforded by certain experiments made by Dr. C. Féré. In an article in the *Revue Philosophique*[2] he reports experiments which prove that the energy of a movement of reaction to a sensory stimulus of given strength is considerably increased by the simultaneous stimulation of other sense organs, *e.g.*, a reaction to a touch-stimulus may be made more energetic, and the time of the reaction may be shortened, by allowing light to fall on the retinæ, and "conversely, the taking away of all light determines in perfectly normal subjects a prolongation of the time of reaction, which may exceed one-fourth or even one-third of the normal time." And he shows that similar effects can be produced by heat, sound and electrical stimuli. Féré shows also that a general state of tension of all the muscles of the body favours rapid and energetic movement of any one set of muscles, that, *e.g.*, the time of a certain reaction is shorter when the subject stands than when he reclines during the experiment.

In his book *Sensation et Mouvement*[3] Féré reports other observations which bear out this view. He shows (p. 7) that the converse of the above statements is true, that not only is a state of general muscular tension favourable to mental activity, but mental activity is favourable to muscular work, that the force of a maximal voluntary contraction measured by the dynamometer may be increased by as much as 25 per cent. through immediately preceding intellectual activity. On comparing the maximal muscular efforts that persons of different classes are capable of putting forth, he finds that persons accustomed to intellectual work can produce momentary contractions of greater force than can be produced by manual labourers, and he sums up the result of his observations of this kind in the statement that "the force of the maximal momentary contraction varies with the

[1] *Analytic Psychology*, vol. i., p. 172. [2] Oct., 1890. [3] Paris, 1900.

degree of habitual exercise of the intellectual functions" (p. 5).

Féré shows also that active or passive movements of one limb, continued for some few seconds, result in an increase of the force of the maximal contraction of which the other limbs are capable by as much as 20 per cent. or more (p. 8); and that even the movements of speech may produce a similar effect. "When a limb is put into action, the movement, be it voluntary or passive, determines upon the cerebral motor centres of the limb an exciting action that extends itself to the neighbouring centres" (p. 12). M. Pitres is quoted as having shown that every destructive lesion of the motor region produces a muscular enfeeblement of all four limbs, and Dr. Féré asserts that in his experience "the destruction of any cerebral centre whatever produces in general a certain degree of intellectual enfeeblement" (p. 13). On page 25 we read: "All these observations taken together show us that a cerebral centre, each time that it becomes active, provokes, by a process not yet understood, an excitation of the whole organism". Féré then goes on to confirm these conclusions by a series of experiments on hysterical and hypnotised subjects in whom corresponding effects are still more markedly displayed; and he shows that stimuli applied to internal organs produce similar results, and he sums up thus (p. 53): "One may say then that every peripheral excitation determines an augmentation of potential energy," and again, "*les excitations périphériques déterminent une augmentation de l'énergie disponible, de la force utilisable*" (p. 60).

I have quoted thus extensively these observations and conclusions of Dr. Féré because they justify in the fullest manner, and indeed, not only justify, but imperatively demand that we entertain, some such conception as I am here suggesting, namely, the conception of the interconnected mass of the afferent neurones as forming a reservoir of energy to which all the afferent nerves contribute in proportion to the degree to which they are stimulated to activity, and on which all efferent channels draw when thrown into activity.[1] To put the whole matter concisely as I conceive it and in the terms I propose: The neurones of the afferent side of the nervous system constitute a common reservoir of neurin, and a variable head of pressure is kept up in it by the

[1] The cerebellum which seems to consist chiefly of a mass of neurones forming relays upon sensory paths leading to the cerebrum must be regarded as constituting a principal part of the reservoir, and it is in fact frequently spoken of by physiologists as a store-house of energy.

liberation of neurin in these neurones, a liberation which perhaps never altogether ceases in any part, but which is much accelerated in any groups of which the peripheral ends are in any way stimulated; and the pressure is high when large groups are subject to stimulation, low when peripheral stimuli are few and feeble. From this reservoir neurin escapes continually into efferent tracts by channels which vary from moment to moment of waking life, channels which form therefore an ever-changing tridimensional neuergic pattern.[1] And these channels are so organised and interconnected to form systems and subsystems that, when during the activity of any partial system, a rise of pressure of neurin in the reservoir is brought about in any way, this increase of pressure leads, not to an opening of other independent channels, but rather to a spreading of the excitement through other parts of the system already partially active.

This mode of spreading of the excitation-process is seen in its simplest form in the spinal cord after ablation of the brain. A gentle stimulus will cause a reflex contraction of a small group of muscles, and increase of the strength of the stimulus applied to the same nerve endings will then cause other groups of muscles to contract, the movements determined being, not irregular and haphazard, but co-ordinated and, in some degree at least, purposeful, *i.e.*, adapted to the carrying out of some definite act such as walking or swimming, and this is true "even when the stimulus, instead of being restricted to a narrow sensory area or path, affects simultaneously large surfaces or wide channels".[2] The transition from sleep to waking brought about by the repetition of an auditory stimulus, as we have traced it above, is but a more complicated example of this spreading of the excitation-process through organised systems of neurones, the stimulus being in this case largely re-enforced and complicated by the internal stimuli arising in the viscera and skeletal muscles, and in this case the spreading involves conduction-paths, not only of level i. to which it is confined in the isolated spinal cord, but ultimately of all levels up to the highest.

This view of the mode of functioning of the brain is fully in harmony with that view of the functions of the spinal cord to which physiologists have been led by the rapid growth

[1] I adopt the phrase 'neuergic pattern' suggested by Mr. H. R. Marshall in his article in No. 44 of this journal.

[2] Schäfer's *Textbook of Physiology*, Prof. Sherrington's article 'The Spinal Cord,' pp. 843, 844.

of our knowledge of the facts in recent years. We can no longer regard the cord as consisting of 'centres,' *i.e.*, of groups of nerve-cell-bodies that are the sole or principal storehouses of energy and the seats of its more or less spontaneous liberation and direction. We have rather to regard the cord as a complex interconnected system of nervous channels, every part of which is equally capable of setting free a certain amount of energy in response to stimulation and in proportion to the intensity of the stimuli, while the direction of the flow of the liberated energy is the function of the mode of interconnexion of the channels. The final step towards the adoption of this view has been rendered necessary by recent work of Prof. Verworn and his pupil, Dr. Baglioni.[1] It was formerly held that the spasms of the animal poisoned with strychnine afforded the most striking and unmistakable manifestation of the spontaneous liberation of energy in the 'motor centres' of the cord. These observers have shown however that even in the convulsions of the strychnine-poisoned animal the continued outflow of energy from the cord by the efferent nerves is dependent upon a continued influx by the afferent nerves, chiefly those of the 'muscular sense'.[2]

[1] *Engelmann's Archiven* for 1900 and supplementary volume of same year.

[2] Sir J. Burdon-Sanderson in a recent communication to the Physiological Society has questioned the validity of Verworn's and Baglioni's conclusion, showing that in the strychnine-poisoned animal a single stimulus may cause a series of about ten twitches of diminishing vigour, although all other afferent impulses be prevented from reaching the cord. It is not clear however that this constitutes an exception, it would seem rather to be an instance of multiple response to a single intense stimulus exactly parallel to the multiple response of the visual apparatus to a single intense stimulus which I have recently described (*Brain*, Winter, 1901, p. 603).

II.—HEDONISM AMONG IDEALISTS (II.).

By Bernard Bosanquet.

III. I return to point (1) of section 102, the author's contention that "the idea of Perfection cannot give us any criterion of moral action".

What has been said above, first as to the true nature of a good criterion as (*a*) essential and not extraneous and (*b*) concrete and not abstract, and secondly as to the true process of judgment which is parodied by Hedonic calculation, belongs in substance to the present argument. It only needs to be applied to the author's contention in three respects, (*a*) as to his ruling out the work of a criterion in hindering self-deception; (*b*) as to the assumption that the idea of perfection can only be applied by comparison in the abstract; and (*c*) by showing that the process on which we rely is not confined to development of ideals as contrasted with their satisfaction.

(*a*) The argument of section 104—I am not sure whether it is directed against Green—amounts to ruling out the moral danger of self-deception. Yet I should have expected Mr. McTaggart to accept the principle "*Quicquid petitur, petitur sub specie boni*"; and if so, there is no immoral choice which does not depend at bottom on self-deception. Even apart from this principle, the field of possible self-deception in morals is certainly enormous and extends over almost all, if not quite all, strictly ethical choices. Thus, I submit, it is a serious error of theory to separate the moral and intellectual elements of the choice. But this is, as it seems to me, the essence of Mr. McTaggart's argument. The supposed moral agent—he urges—*ex hypothesi* intends to do right, before he knows what the criterion says. Otherwise, he asks, of what use could a moral criterion be to him? If he is not going to be deterred from a choice by its being shown to be wrong, he can have no use for a criterion that tells him which choice is right and which is wrong. This argument is directed against an alleged fault in the reasoning

of those who advocate the criterion of Perfection. They take their examples, the author affirms, not from a choice between two courses alike *prima facie* moral, but from a choice between courses one of which is stated as good or in the name of good, and the other as either defiant or neglectful of morality. In such a case, he agrees, the idea, or one might suggest, the mere name of perfection is enough to distinguish between them. But he contends, for the reason above mentioned, this is no test of the value of the criterion to a moral agent desirous to do right. His perplexity can only be between courses both of which appeal to him in the name of right. A criterion which only warns him against a choice which by its statement is immoral—a criterion which = "Do what you believe to be right and not wrong" —can be of no service to him.

I do not know whether Green is here aimed at, but his argument will serve to point out what I take to be the defect in Mr. McTaggart's. Green selects,[1] no doubt, as one example of the operation of his criterion, a choice which, *for the critical onlooker*, appears to be a choice between a moral effort and a self-indulgence. But the supposed chooser is to choose I presume by the light of one or other of the criteria in question, and is not to be imagined as in the possession of a moral touchstone prior to their operation. The question then is which of the two criteria will most readily help the supposed chooser to the choice assumed by the critical onlooker to be right. Green alleges that the Hedonic criterion will or may co-operate with the tendencies that make for self-deception, whereas the criterion of perfection, from the fact that it appeals to a standard heterogeneous from personal enjoyment, is more likely to effect a discrimination such as no confusing desires can blur.

It is implied that the choice is one in which a man could hardly go wrong except by serious self-deception. But this, from Green's point of view, makes the case stronger against the Hedonic criterion, which by operating in *pari materia* with the source of confusion, seems to him likely to permit such a confusion to take place even in a case where it should be easily avoided. It does not indeed make the positive case very strong for the criterion of perfection, because the choice selected is a fairly simple one, purposely with a view to its negative bearing against the Hedonic criterion. Nevertheless it suggests, what is Green's principle throughout,[2] that to be habitually preoccupied with an idea of perfection

[1] *E.g.*, *Prolegomena*, sect. 374. [2] *E.g.*, sect. 308.

in application to life is the most practical and important safeguard against self-deception in moral choices. The separation of the moral resolve and the intellectual judgment on which Mr. McTaggart founds his objection, rules out this use of a moral criterion, because it supposes that the determination to do right being first and independently made, the chooser is henceforward an unbiassed reasoner in the application of a criterion. But this seems to ignore the whole nature of a moral choice, which is essentially the maintenance of effective insight against blinding influences. In short, then, *even if*, what has yet to be discussed, the criterion of perfection could give little or no guidance in absolutely *bonâ fide* perplexities between courses of conduct with a moral bearing, the fact that it is a safeguard in cases where the perplexity pretends to be but is not absolutely *bonâ fide* is enough to make it cover by far the most important part of the range in which Ethics can be asked for guidance. In all intricate matters of conduct, *e.g.* in law or politics, where varying and important emergencies press upon us, to keep the right principle and not the wrong one before the attention is of the very first practical importance. It makes constantly the whole difference between good and bad work. It may be admitted that if the proposed criterion only contained, as the author contends, such a rule as Do what you really think right, it could not be fertile of detail; though preoccupation even with such a rule is of much more decisive importance in life than might be supposed, because distraction of attention is one of the great instruments of self-deception. But the question, what it contains, is now to be discussed.

(*b*) In *bonâ fide* moral difficulties, the author argues, preoccupation with the idea of perfection can give no guidance. For the supreme good, as we learn its nature from Metaphysic, cannot be realised perfectly by any action in a world of matter, time and space. Nor can we determine by comparison which of alternative ends, or which division of resources between competing purposes, will realise it least imperfectly. For, in the supreme good, choice is precluded. No element of perfection is wanting and each is there to the full. But choice is the essence of our position.[1] In all ends, which we can conceive as moral ends, there is some good; complete good in none. Our question is which good to select and which to sacrifice, and how to compromise be-

[1] Mr. Taylor has put the same point very effectively in *The Problem of Conduct*, but I have not the reference.

tween them. And this a comparison with perfection, where all good is present in fulness but in shapes wholly different from those we know, can never tell us. The attempt to demonstrate it leads to sophistry. We insist that the element, which happens to interest us most, forms a link between a certain action and perfection. And we neglect the fact that other elements, absent in this action, are present in others which we happen to dislike.

1. If the means of guidance is to be such an abstract comparison as Mr. McTaggart suggests, I think his conclusion follows. It is impossible, as Plato points out, to go without intermediate steps from the most abstract universal to the most concrete particular. The attempt to do so involves Eristic, *i.e.*, either the refusal to ascribe predicates, or the assertion that one predicate is as true as another. This is what Mr. McTaggart imputes to the Perfectionist views. But as constantly happens in philosophical discussions, Perfectionists would retort the accusation, and say that the intermediate steps are needlessly cut away and Eristic introduced by the operation of his theory.

The whole issue turns on the refusal to recognise our imperfect experience as a stage in which the idea of perfection is active, relatively to the capacities of that stage. By recognising this idea only in the abstract shape which presents itself as the result of metaphysic, and failing to insist that this abstract shape is imperfect until charged with the life and power of all reality, the idea of Perfection is made a particular instead of a universal. It becomes a hard atom, which takes up an attitude of exclusion to the world whose core it should be. Thus the attempt to obtain moral guidance from it takes the shape of a comparison with it, and becomes parallel to an attempt to obtain scientific knowledge from inspecting the principle of the Uniformity of Nature. In each case we have taken the principle apart from the stages in which its nature is revealed, and have thus incapacitated ourselves for seeing it embodied, though imperfectly, at every stage of our experience.

Our answer then to the argument drawn from the abstractness of our idea of perfection, by which it fails to show how it includes our reality, would be that in looking for moral guidance we begin at the other end. It may be true —I at least am not disputing it—that the central workings of our thought, which experience cannot undo, compel us to a result which may be stated in the abstract as Mr. McTaggart's view of Hegel's Absolute is stated. But the inevitable abstractness of this result, where experience fails

to fill up the outline of thought, is a positive loss if it debars us from recognising the working of the idea within the tissue of experience. We know that its work will be imperfect, because our experience is imperfect. But that is no reason against its being definite and right as far as it goes. The shape it takes would not do for ultimate reality; but the shape it takes for ultimate reality will not do for the given stage of experience. Thus in science Biology or Chemistry may be likened to growing forms, whose general life principle, when taken out in the abstract, becomes the Uniformity of Nature.[1] But so taken out in the abstract, though interesting for Logic and Philosophy, it is useless to the sciences. They *are* it, in shapes dictated by experience at every moment, but when it is separated from these they cannot use it. So with the moral life. Its shape at any moment is the idea of perfection working in experience down to that moment, as a striving after the completest harmony possible under all the conditions, in other words after what we really want. Taken out and pushed home in the abstract, it becomes useless, for this particular work. The forms which it had generated in the matter of experience have then been cancelled as inadequate to the whole, and therefore all links are cut between Perfection and human life. But they were not inadequate to the part; on the contrary, the effort which generated them is the same as, and an essential part of, that which as an *anticipatio naturæ*, regarding only the central lines of experience, leads to the abstract conception of ultimate reality. The "tacking" of Dialectic makes no difference to this adequacy. Mistakes may be necessary; but they are necessary only as efforts after harmony, and, as the strivings of reason, are relatively good. Indeed, everything but ultimate reality as such may be treated as a mistake. But there are mistakes and mistakes. Our object is to make only that mistake which our whole experience cannot help us to avoid.

The point may be put more simply by saying that we test courses of action not by the abstract metaphysical idea of the supreme good, but by the tests by which that idea itself is obtained—and which therefore form the rule of the entire process of practical experience—the dialectic of desire. The essence of the test at every point is the resolution of contradictions. Our action is precisely parallel to that by which scientific theories are remodelled and adapted; and,

[1] Ultimately, of course, the Absolute. But I take it at a stage when the distinction of Knowledge and Practice still persists.

like scientific theories, our morality is no doubt in the main a working habit or tradition, in course of constant re-adjustment.

I am convinced that the reiteration of such phrases as "choice" and "preference" is fatal to understanding the nature of the moral criterion. All voluntary action is "choice" in the sense that it is willed; but the phrase suggests the selection of one ready-made course of conduct out of a number, as if there were hundreds before us on the counter of a shop. Thus the question why you choose "it," or which course you "like best," acquires a predominance unknown in real life. For, in fact, action is construction, rationality, invention of individual solutions for individual problems by modification of existing systems. This is what, I think, Green really meant[1] when he insisted that while nothing could follow from a bare definition of virtue, yet morality grows by habitual preoccupation with moral ideas in application to circumstances as they arise. The true analogy is the absorption of a scientific intelligence in detecting the true bearings of a principle such as natural selection. Such an absorption is fruitful, in morality and in science alike; and fruitful in proportion as the principle is clearly and justly apprehended.

Then, it may be asked, do we admit morality or Ethics, which we here compare with Biology and Chemistry, to be a natural science; and do we not abandon the contention that a metaphysical idea is necessary for the guidance of conduct?

This is very much a matter of degree. I admitted that the Uniformity of Nature as such is of no use to Biology or Chemistry, because it is notorious that these sciences can exist and flourish without casting a glance on Logic. But the total absence of a working faith in Uniformity would be and has been, I suppose, fatal even to the most purely natural science. So one might say that in a sense a logical faith is necessary and useful to the merest natural knowledge. And this logical faith itself has degrees; and notions of system, method, and explanation may, though I am slow to assert it, be found really helpful in determining scientific problems.

Morality deals with higher categories, and its working faith involves a unity of a type not known to pure natural science. Such a unity is really a metaphysical idea, though to say in what forms and disguises it actually operates in the everyday mind would be a very difficult matter. But

[1] *Prolegomena*, sect. 308.

it seems clear that the clue which the mind follows, however ignorantly, is in substance that idea of perfection which pursued in its main lines beyond the details of experience becomes the Idea of the Absolute. No doubt it is the unity just in advance of where we stand, rather than an idea of the ultimate metaphysical Absolute, which at any moment, as Green insists, aids and guides the ordinary man. Morality depends on metaphysic, I am suggesting, not in the sense that it works with the explicit determinations of the absolute, but that it operates through conceptions of unity which, if criticised or doubted, only metaphysical investigation can elucidate or justify. The idea of the Supreme Good is the ultimate elucidation of this conception, but cannot be the shape in which it actually operates within the everyday mind. This is Plato's doctrine, and Green's;[1] and it meets I think, in principle, the difficulty of an abstract comparison between a course of conduct and the Supreme Good.

2. It remains to explain more in detail how, in the adjustment of moral conduct, we obtain guidance from the idea of perfection as thus understood. The essential point is that the situations, which constitute the problems of conduct, are highly individualised, and demand no less individualised solutions. Existing morality, and current knowledge of man and of the world, are the organs by which the impulse towards unity is brought into relation with specific character and circumstance. These play the part in practice which is played in the development of theory by acquired science and experience.

And it is very important not to demand too much. The idea of a magical possibility of absolute rightness in morality seems to be at the root of ethical pessimism. The best rightness we can hope for is to be right for us under all our conditions and limitations.[2] It is because these conditions and limitations are so complex that moral problems are not hopelessly insoluble. We have not got to say what is right for others, or what would be right for ourselves if we were other than we are. Our judgment in morality is about as good and as bad as our judgment in other complex matters. We attempt—whether by habit or by reflexion makes no

[1] *Prolegomena*, sect. 309, *cf. Republic*, 505 E. "The good, which every soul pursues, as the end of all its actions, divining its existence, but perplexed and unable to apprehend satisfactorily its nature"—*i.e.*, it is our guide throughout, but changes as we pursue it.

[2] This is the very type and essence of science. Mr. Taylor seems wholly off the right track at this point, in suggesting that individualisation makes morality subjective (*Problem*, p. 361).

difference, for trained habit can make all adjustments of which reflexion is capable—we attempt to harmonise the situation presented to us, including our own selves, following the logic of the objects of desire towards real satisfaction. We are not brilliantly successful; but we are about as successful in conduct as in the other matters which we approach in the same way; for example in science, or in practical organisation.

We aim, then, at satisfaction, or the removal of contradictions in experience where our action can affect it, in short, at determining and attaining what we really want. It is a mistake of principle, I hold, to attempt to lay down beforehand in what our satisfaction is to consist, whether in pleasure or in any other predetermined form of consciousness. That is like binding a physicist before he begins his science in terms of what he is to explain phenomena. Every problem or situation is thoroughly concrete, though universal and the meeting point of universal forces and principles. Our business is to invent the course which shall most remove contradictions; to theorise the individual situation, including our own resources.

This is why, though as a rule I have the utmost respect for Mr. McTaggart's arguments and examples, I cannot think his instances here to be of a relevant type. They rank, it seems to me, with questions which are carelessly propounded as puzzles to students of practical sciences, containing no possible data for an answer. It is like saying to a gardener, "Am I to prune an apple-tree in my orchard?" or saying to a doctor, "My child has spots on him; what do you think can be the matter?" The answer comes at once: "Show me the tree" or "the child, and I will tell you what I think". Just so it is asked, Is marriage the best arrangement? The moralist, if I am right, and as Green maintains,[1] has no immediate insight based on a comparison with the idea of perfection in the abstract. He will demand that the question shall be closely stated, with regard to the stage of social advance, the race and civilisation about whom it is asked, and will then treat the issue as a serious inquiry, largely sociological but having an ethical aspect through its bearing on character. He can determine the general nature of the claims and capacities of selves in a definite type of society; and may then be able to offer a judgment on the question what arrangement of institutions provides a conciliation of these with the least degree of injury. The point

[1] *Prolegomena*, sect. 379.

of view which makes him a moralist lies in his being alive to more and deeper aspects of unity than would appeal to the biologist or to the jurist as such. His eye is differently trained. This is exemplified by Green's investigation.[1] It flows directly from his conception of a spiritual unity gradually taking form through the working of an idea of good in the experience of certain types of men. For other types of moral being the conclusion might, conceivably, be different. In such a real investigation of an ethical question the Hedonic criterion, I believe, could never occur to the student's mind.

So in the conflict of different ends, or in the distribution of resources, such as money and time, between different objects. The problem is altogether transformed when we state it as the endeavour to construct a solution for a highly complex situation, from what it is when we take it as a question asked in the abstract, out of all context. It is put to us again, Does a public school do a boy more harm or good? In general, I should say, no answer can be given. In view of a particular boy, whose character and surroundings we know, and of a particular school, there is no great difficulty as a rule in forming a fair judgment on the question. As regards the distribution of time or money, there is a difficulty which I have admitted, in bringing the higher forms of unity into relation with quantitative terms. But as in æsthetic or medicine, so in ethics, the result is obtained by a frank recognition that every solution of a problem is subject to mechanical conditions. A single question, how much a man should eat, or how loud a note must be struck, or how much colour must be put on the eye of a portrait, is meaningless; and so is the question how much money I should give to charity, or what time I should devote to metaphysic and to bicycling. In plain words, the distribution of money and time must be systematically theorised in connexion with the possibilities offered by the situation. That we are born into our theories or conventions, and most of us never know that they do the work of theories, is no objection at all, for precisely the same is true of our mental furniture of every kind. Thus a particular decision is approached on the basis of a rationalised habit, dictated by the main aim and design of life. I have formed, or have picked up, or inherited, a notion or instinct of what I can achieve and how I mean to achieve it. On this all details are consequential, though, of course, in most lives, with a very

[1] *Principles of Political Obligation*, sect. 233.

loose logic. But logic is no looser in morality than in opinion, which admittedly is meant to be logical. From the main aims and method of life certain necessities follow as to adjustments of time and money; charity is or should be relative not only to the money I can spare but to the attention I can devote to its utilisation, and that again follows from my line of life and special capacities. Recreation and work are adjusted by a concrete theory of the way in which the claims on my limited powers may best be met. I do not say for a moment that we are usually right, or even self-conscious, in our decision; but I do say that our life is probably a more rational whole than our opinions, and that the latter are admittedly a thing which ought to be logically coherent. There is no theoretical difficulty, therefore, in saying the same of our conduct.

If it is urged, as I think Mr. McTaggart means to urge in his demand for principles of distribution, that we must lay down beforehand at least what kind of things are more important, and what kind of things are to give way, I answer, as above, that in a sense this is obvious, but in a sense I believe it to be a dangerous fallacy. Our principle, the logic of our objects, will tell us in its working what are deep-lying contradictions, what are superficial, what apparent harmonies are pregnant with latent discords, or what apparent discords are introductions to fuller harmonies. It will tell us all this, so far as our knowledge and inference extend; and that limits the situation with which in morality we have to deal. We cannot escape its operation, so long as we act *bonâ fide*. The sense that "it is all very well, but there is something wrong," which attends a victorious self-deception by which we enter on a doubtful course of conduct, must be given its place, if we are true to ourselves, and must be tracked out to its significance. We are quite safe to miss our own satisfaction, unless we take sincere account of all we know and feel, and let each element have logical fair play.

But if it is meant that we are to prescribe the species of our feelings of satisfaction beforehand, that is, I think, a pitfall. Some solutions may bring pleasure, others intellectual repose; others "the approval of conscience"; others the tranquillity or endurance of completed tragedy. All we need to know is that we seek complete satisfaction; the clashing and harmonising of objects will indicate our defectiveness or our success in ways which could not be adequate, if it were possible to lay them down beforehand.

It is, I am convinced, a profound theoretical error to think of current moral and social ideas and traditions as something

arbitrary, which might just as well have been different. Just like the sciences, they are a tissue of adaptations, generated by the struggle of logic, with different degrees of insight, to harmonise situations from moment to moment. I am not saying that life is wisely or rightly determined by these adaptations, but I am saying that it is thoroughly determined, and that to suppose our own choices to be in principle capricious or irrational is to misunderstand our position and the essence of the moral problem. Not only is it scientifically wrong to treat the bulk of social tradition as irrational in its genesis, but it shows a lack of insight to treat conduct and modes of life as in essence irrationally determined. The logic of life is imperious, and conduct is guided by the dialectic of its objects in the minutest details. To urge that it is full of error and incoherence is irrelevant; the point is that the machinery of determination is operative throughout, and is of an assignable nature. The imperfection of its results is itself necessary, and relative to the gaps of our experience.[1]

I may further illustrate my point by referring to Mr. McTaggart's evacuating interpretation of "my station and its duties". (I in no way attribute my views to Mr. Bradley.) The idea of his station and its duties, he maintains, does not teach a schoolmaster how to deal rightly with a particular boy on a particular occasion. This is something which I am tempted to say that I cannot understand. It must mean, no doubt, that the author reduces the idea of one's station to a general conception of one's place in society as distinct from other places. But surely this is a very poor idea of one's station. Who says "schoolmaster" says "a walking theory and practice of education". This is "what it is to be" a schoolmaster. His conception of his position as distinct, say, from that of the clergyman and the parent, is just the outline of an idea which theory and experience have filled in and adapted in detail, till his position involves for him a distinct conception of his individual duty to each individual boy who is entrusted to his charge, and this again carries with it the reaction of his trained nature upon every occasion and situation which arises. That his action is not in form determined by reflexion or deduction makes, as I urge throughout, no theoretical difference at all. It is governed in the end by ideas and must be condemned or judged in their light. He is bound to have considered what, under all the conditions, can best be made of each boy so far as the schoolmaster is concerned; and this is just his con-

[1] *Cf.* p. 307, above.

crete idea of his station. It is a clear case of such a theory as I contend for.

Therefore, about the general method of the determination of conduct, there is, if I am right, no doubt or difficulty whatever. It is simply the logic of the objects of desire, by which we pursue the idea of perfection as our complete satisfaction. It is subject to blindness, due partly to lack of experience and inferential power, partly to self-deception by which partial objects, stimulating desire, are preferred to the whole. At every stage our idea of perfection represents our best construction of the whole; and in proportion as criticism touches it metaphysic is needed to sustain and develop it. Its working through habit and knowledge to resolve the contradictions of our individual situation is not to be taken as a pronouncement of abstract Metaphysic; but acting through categories which nothing but Metaphysic can justify, it plays quite a different part in the science from that played by Uniformity of Nature in Chemistry and Biology. And even for these sciences the entire abandonment of the logical idea which works in them would mean annihilation.

A consequence of great importance seems to me to follow from the nature of this mode of determination, as compared with the summation of pleasures. As objects of action become more complex the translation of them into quantity tends to bracket them as equal in value. Every one knows how heterogeneous complexes, say, the marks of wholly dissimilar examinees, insist on summing themselves up to the same total. The linear numerical series has no way of representing the different composition of identical sums. Now between alternative complexes of objects which give the same sum of pleasure, though as wide asunder in their nature as the poles, a Hedonic criterion cannot distinguish. Whereas, as situations become more complex, the adequate solution of each in concrete science tends to become more clearly differentiated; so that situations of modern life, on careful consideration, constantly seem to dictate their own solution beyond any doubt.

(*c*) From the point of view here taken, the two standards of immediate harmony with environment, and of development of ideals, become commensurable. Happiness, in the sense of harmony or satisfaction of the whole of which we are members, becomes the only test. Deliberation is incipient development, and development is for the sake of removing contradiction, or realising satisfaction. How completely we are able to conceive the whole to which we belong

must be a question of our individual experience and capacity. On this depends the soundness of our judgment in incurring immediate contradictions, that is, in making sacrifices (whether merely in our own persons or in the persons of those whom we are able to affect) with a view to possibilities of development either future in the lives in question, or wholly beyond them, or remaining partial and painful within them. This judgment is just of the same order as that which we are testing daily and hourly in accepting *prima facie* sacrifices or contradictions for the sake of the whole. It seems to me precisely analogous to our behaviour in the realm of theory, which mainly consists in deciding what contradictions are *ad hoc* to be disregarded, and what, as more fundamental, we must apply our scientific resources to reconcile. Ultimately, no doubt, the idea of the Supreme Good must include what for us are the separate aspects of theoretical and practical perfection. But speaking in more relative terms we may say that the idea of perfection is for conduct what the idea of system is for science.

Conclusion.

The most serious objection to these views which I should expect to be advanced, would be that according to them we make no use of the definite content of the abstract idea of supreme good, as metaphysically established (I suppose) for all possible worlds, in determining our conduct. We use it in a confessedly imperfect form, in which, I think Mr. McTaggart might probably contend, the empirical and metaphysical elements are undistinguishably mixed, and therefore it cannot be truly said that morality thus determined rests on a metaphysical basis, as Green for instance seems to assert. This point was referred to some pages back, but it may be well to recur to it in conclusion. The answer would, I think, begin by accepting the imperfection of morality as a whole, and of our morality. As Mr. McTaggart insists, perfection could not be realised in an experience like ours. In attained perfection we should have, or there would be, a complete experience forming one harmonious web with the idea of perfection; and as all would be true and satisfying no question would arise how much was false. In our imperfection, we are haunted by this question, and we must admit that the whole tissue of our morality is tinged with falsehood. Nevertheless we are able, from a metaphysical standpoint, to verify *an* idea of perfection as working throughout the tissue of life. We cannot apply it to particulars of conduct

by metaphysical considerations, but we can justify by metaphysical considerations the logical effort which is always constructing particulars in obedience to the idea. Though our morality is tinged with falsehood throughout, yet we know that it is truth, relevant and relative to our life, in as far as it pursues the line of effort which the nature of reason involves. And we know that somewhere in the central tendencies of this effort, the tendencies whose negation would be to us the most fundamental contradiction, there lie characters continuous with and implying those of ultimate perfection. After all, the Absolute needs us and our conduct just as we need it. We are in it, now if ever, and we can hold to it, if at all, with the full breadth of reason and need not allow our grasp to be attenuated to a thread of hope. Our experience, we must remember, is in one sense a fuller revelation than an abstract idea of ultimate reality, if in another it is less perfect. Its backwardness is due to the magnitude of the enterprise which it implies; for it demands and begins the harmonisation of a total world, and not merely the anticipation of its general nature.

III.—THE ORDER OF THE HEGELIAN CATEGORIES IN THE HEGELIAN ARGUMENT.

By Mary Whiton Calkins.

The tendency of Hegel's immediate followers to regard the categories from the standpoint of Hegel himself has been followed by a sweeping reaction. Instead of teaching that each category is inevitable, and that it must occupy precisely its own position in the line, modern commentators usually hold that the order of the categories is arbitrary and artificial; that the choice of the categories proceeds on historical, and even in large measure on empirical grounds; and that the study of Hegel's Logic possesses therefore a chiefly antiquarian interest.

It seems probable that the truth lies somewhere between these two extremes. On the one hand, nobody can read either the larger Logic or the Logic of the *Encyclopædia*, without the conviction that what is regarded as progress is often mere repetition: in "Essence," for example, the categories of Force and Manifestation, Inner and Outer, Ground and Consequent, are merely co-ordinate names for the same pair of distinctions and do not in the least justify Hegel's claim by growing out of each other, as successive transcendences of opposition. More than this, identical categories, under different names, appear not merely in close succession, but at essentially different stages of the argument. Thus Identity and Difference, categories of "Essence," are barely distinguishable from Reality and Negation which belong to "Being"; and Mechanism, a category of "Notion," turns out to have the precise characteristics of the earlier categories, Cause and Effect and Reciprocity. But to admit the presence of needless steps and of puzzling iterations is not to deny all value to Hegel's argument. Not merely Hegel's result, but his method of attaining it is of permanent value; and in some modification or another, his argument must be retraced

by everybody who reaches his conclusion: the conception of Reality as an Absolute Self.

This paper proposes a new reading of Hegel's Logic. Neglecting artificial distinctions, it aims at a rearrangement which will exhibit the parallelism of many pairs of categories, and which will disentangle distinct lines of argument. At the same time, it proposes no addition whatever to the subject-matter of the Logic and only one important omission: the sections included under 'Quantity' and 'Measure'. The following outline summarises the argument of the Logic, and indicates the proposed changes of order.

A. (Introduction.) Metaphysics is possible, for
  I. Ultimate Reality is not undetermined. (Book i., *Being and Naught.*)
  II. Ultimate Reality is not unknowable. (Book ii., *Essence and Appearance* and parallel categories.)

B. I. Ultimate Reality is Absolute One, for
  a. Ultimate reality is not a single reality, among others, for every such single reality is
    1. (*a*) Same and other. (Book i., *Determined Being;* book ii., *Identity and Difference.*)
      (*b*) Like and unlike. (Book ii., *Likeness and Unlikeness;* book. iii., *Notion and Judgment.*)
    2. Dependent on others. (Book ii., *Causality.*)
  b. Ultimate Reality is not a composite of ultimate parts. (Book i., *Finitude and Infinity and Being-for-Self;* book ii., *Action and Reaction;* book iii., *Mechanism.*)
 II. Ultimate Reality is Absolute Self, for
  a. Ultimate Reality is not mere Life. (Book iii., *Life.*)
  b. Ultimate Reality is not Finite Consciousness. (Book iii., *Cognition.*)

The remainder of this paper elaborates this argument and seeks to justify the re-organisation of material.

A. Possibility of a Doctrine of Ultimate Reality.

The logical beginnings of Hegel's philosophy must be sought in his discussions of two related doctrines—alike in that they both make metaphysics impossible. The first of these is the conception of ultimate reality as undetermined —a doctrine whose most perfect exponents are the Vedantic

teaching about Brahma, the Eleatic doctrine of Pure Being, and Schelling's later conception of the Absolute as Pure Indifference. Such a theory makes metaphysics, the study of ultimate reality, impossible; for it is futile to study the nature of that which is, by hypothesis, without attributes or determinations.

It is unnecessary to consider in detail Hegel's treatment of this theory, in the first section of book i. of the Logic, for all commentators are agreed in their reading of his argument. He opposes the theory of an utterly undetermined Absolute, or Pure Being, by such an analysis of the concept as discloses its inner contradictions. For Pure Being, entire indeterminateness,—Hegel shows—would be utter absence of reality, Pure Nothing;[1] whereas ultimate, or complete, reality can never be truly described as bare nothing, since, at the very least, the reality of the present moment exists. Therefore, because it is not entirely indeterminate, ultimate reality is in some sense qualified or determined; and the effort of metaphysics to discover the nature of this determined, ultimate reality is justified.

Distinct from this theory of the Absolute as undetermined reality, yet also very closely allied to it, is another doctrine which would make a positive metaphysics impossible. This is the conception, emphasised and enforced by Kant, of the ultimate reality as unknowable. On this Kantian theory of the limitation of knowledge, all that we know is *ipso facto* bound by the forms and limitations of human consciousness; and attainment of the ultimate or absolute reality is utterly impossible. Such absolute reality becomes, therefore, unknowable. Hegel discusses this doctrine in many sections of the first two divisions, "Essence" and "Appearance," of book ii. of the Logic. He makes use of ontological and of cosmological, rather than of epistemological, terms to express the relation of Appearance to Essence, of Existence to Ground, of Form to Matter or of Manifestation to Force. But by these parallel sets of terms he means, fundamentally, what Kant had meant by knowable and unknowable;[2] and the main outlines of his argument against Kant are very clear. He shows first, that the knowable phenomenon—appearance or manifestation—implies of necessity the bare existence of

[1] *Werke*, iii., 73; *Encycl.*, § 87. (The references to the larger Logic are to the pages of the second edition of the complete works, vols. iii.-v., 1843. The references to the *Encyclopædia* are to the sections of the later editions; the translation is that of Wallace. Exponents refer to the paragraphs of page or section.)

[2] *Cf. Werke*, iv., 127; *Encycl.*, § 124.

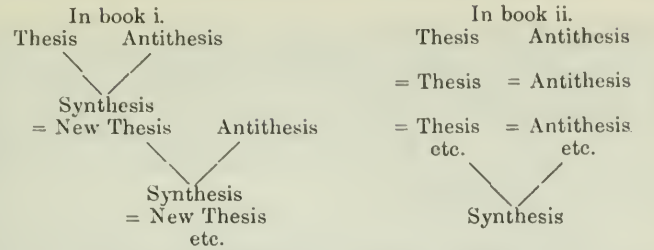
a more ultimate reality—the alleged Unknowable—Essence or Force. But this, as he points out, makes it clear that the Unknowable Essence stands in necessary relation to the known phenomenon and that it is therefore, to some degree, itself known. In other words: we know at least the relatedness of ultimate to phenomenal reality; and the knowledge of even this one fact (its relation) forbids our excluding ultimate reality from the universe of the knowable.[1]

The conformity of Hegel's terminology, in the "Essence and Appearance" sections of book ii., to the current scientific conceptions of his times, sometimes obscures, but never obliterates, the essential outlines of the argument. He shows, by repeated illustration, that the alleged unknowable is invariably linked to the known phenomenon; that it is, indeed, described only in terms of the known. Thus 'magnetic force'—an example of alleged unknowable force—exists only in so far as it is expressed in actual magnetic phenomena. Out of relation to these phenomena, magnetic force is not merely unknowable but non-existent. So, Hegel insists, the philosophising natural science which explains every set of phenomena by some hypothesised force overlooks the truth that the force can itself be defined only as the reality of these particular phenomena. Such a theory, therefore, involves the thinker in a vicious circle—a "Hexenkreise," as Hegel somewhere calls it. Throughout these sections, Hegel's illustrations are chiefly borrowed from Schelling's nature-philosophy. The theory which he combats is, however, as has been pointed out, the characteristic teaching of Kant. Essence and Ground and Force are alike in that each is supposed to be unknowable reality; and what Hegel teaches is that every alleged unknowable reality is postulated merely in so far as it stands in inevitable relation to the known, and that thus the supposedly Unattainable Reality is unwittingly admitted (even by those who call it unknowable) to be known.

The difficulty of these sections is due, in large part, to the arbitrary assignment of certain pairs of the categories to the division headed "Essence" and of others to the class named "Appearance". This division is doubly untrue to the underlying conception of Hegel, since it assigns to "Essence" categories—such as Consequence and Form—which rightly belong to "Appearance"; and, on the other hand, includes under "Appearance" categories, such as Content and Inward, which have to do exclusively with "Essence".

An even more serious difficulty is the arrangement of these categories on the model of book i., in triad form, as if they grew out of each other by antithesis and synthesis, whereas most of these categories of book ii. are, in the main, re-statements of the fundamental opposition, that between Essence and Appearance, the really real and the apparently real. The true movement in the two books may thus be symbolised:—

[1] Those portions of this paper which appear in the larger type contain a statement of its main teaching. They may be read consecutively, neglecting the sections in small type. These latter undertake to substantiate this reading of Hegel by an examination of the text of the Logic.



Ground and Consequence, Matter and Form, Force and Expression, Inward and Outward, and even Substance and Accidents, are virtually variants of the expression Essence and Appearance, though each set of terms is meant to show more clearly than the last the actual relatedness of the Inner and the Outer, and the consequent impossibility of defining ultimate reality in the terms of the Inner only.[1]

B. The Nature of Ultimate Reality.

I. ULTIMATE REALITY IS AN ABSOLUTE ONE.

Hegel vindicates the possibility of metaphysics, by showing the inner contradictions of the two doctrines which would invalidate it. As against the theory of an Utterly Undetermined Absolute, he shows that such an Absolute would be positive unreality and that it is therefore inconsistent with the certainties of immediate experience. It follows, that the supposed Undetermined Reality must always, and of necessity, be conceived as in some way determined. Similarly, Hegel shows that the so-called Unknowable Ultimate does, in fact, stand in essential relation to the known phenomenon. Hegel thus establishes his right to enter upon the metaphysical quest: in other words, to investigate the nature of an absolute reality which is both determined and knowable.

Hegel's conception of this absolute reality is well known: he teaches that ultimate reality is One and is Self (Idea). He lays equal stress on these predicates of reality; but his argument to the absolute one-ness of ultimate reality is more acute, more elaborate and, as it stands, more convincing than his proof that the Absolute One is Self. The doctrine of the unity of reality occupies all the first two books—excepting those introductory sections already dis-

[1] *Cf. Encycl.*, § 136; *Phänomenologie*, A. iii., "Kraft und Verstand". Compare also Hutchinson Stirling's criticism: "'The manifestation,' he says, 'depends on the essence and yet, no less, the essence depends on the manifestation.' This is a simple idea, but with this, and this only, Hegel contrives to wash over page after page" (*Secret of Hegel*, ch. 2, C. 3).

cussed—and two divisions of the third book of the Logic. It has two parts: first, the demonstration that the Ultimate Real is no single, isolated reality, one among others even if pre-eminent among them; and second, the proof that this Ultimate Real is not the sum of such isolated realities. Hegel's treatment of the first of these hypotheses must next, therefore, be considered.

a. Ultimate Reality is not one-among-others.

Hegel's method here as everywhere is one of elimination and of self-refutation. Assuming the truth of the conclusion which he does not hold, he makes it disclose its own contradictions and show the insufficiency of its own claim to be final reality. Thus the examination of every possible case of a single, independent reality results in the discovery that this supposedly isolated reality inevitably implies the existence of more than itself, and that it therefore is not truly isolated. Once more, Hegel's argument has two distinct parts, of which the first receives incomparably the stronger emphasis. He shows that:—

1. *Ultimate Reality is no single reality beside others, because every such reality is at least 'same' or 'like,' and thus implies other realities.*—It is of utmost importance for the student of Hegel to seize the full significance of this most characteristic teaching. Hegel is analysing the doctrine of pluralism in its most general form. Every pluralistic philosophy teaches that some one limited reality—spirit or matter, for example, —is ultimate, albeit not all-inclusive. Hegel aims to prove it impossible that any limited reality, whatever its nature, should be ultimate. To this end, he selects for analysis precisely those attributes of the limited reality which seem to speak most loudly for its isolation, its pre-eminent position and its ultimacy. These attributes are self-identity and distinctness: every limited reality is the same with itself and distinct from any other, as—for example—spirit is spirit and is entirely distinct from matter. Without this self-sufficiency and this differentiation it would indeed be impossible to conceive of a limited reality as ultimate. What Hegel, however, teaches, is this: These very qualities of self-identity and distinctness testify to the relation of the single reality to others. To be different from others clearly implies the existence of these others; and to be identical with oneself implies as certainly, though less directly, an opposition to others. The 'same' is in fact the 'not-other': that is to say, relation to others is not a mere external

appendage, but is itself an inherent part, an inevitable attribute of every supposedly limited reality. Evidently, no such limited reality can be ultimate or final, since by its most intimate and essential attribute—its self-identity—it implies the validity of other realities.

The greater part of the Logic is occupied with the consideration, under every possible form, of the argument just outlined. It appears in each book of the Logic; it involves categories of the most varying names; it is discussed on different levels of philosophical thought; yet it is always, in the last analysis, the same invincible argument which it is Hegel's great merit to have expounded and illustrated until it had become inwrought with the common fibre of philosophical doctrine. The argument first appears in book i., following upon the conclusion that Pure Being —an undetermined Absolute—is impossible. In the section on Determined Being,[1] it is pointed out that every single, isolated reality has a 'character' of its own, and that this, its determination, is also a 'negation' of some other quality and thus a 'limit'—as, for instance, "White is white" implies "White is not-black". So arise the categories of Reality and Negation,[2] followed by several pairs of perfectly equivalent catagories.[3] Under varying names, the supposedly single unrelated Somewhat is shown to imply the existence of another, and to be what it is in reference to that Other: "Being if kept distinct and apart . . . would be only the vacant abstraction of Being. . . . Hence the other-ness is not something indifferent and outside it but a function proper to it." It may be added that both the reduction in the number and the change in the order of the categories of Determined Being, in the Logic of the *Encyclopædia*, as compared with the larger Logic, clearly suggest Hegel's own conviction of the unimportance and the unessential character of some of these categories.

The argument, just outlined, is repeated in more usual terminology, under the discussion—in book ii.—of the categories of Identity and Difference. The analysis of these categories follows, to be sure, upon the discussion of Essence, or Unknowable Reality, but the categories themselves apply very clearly only to the knowable world of determined realities,—the world of Appearance, regarded as itself a world of reality, not of illusion.[4] There can, indeed, be little doubt that these categories, Identity and Difference, are precisely equivalent to the earlier categories, Reality and Negation. The reality of anything—that which gives it its character—is simply its identity with itself and its difference from everything else; and, similarly, negation means other-ness or non-identity (difference, in a loose sense of the term). Hegel's illustrations of reality, negation, and parallel categories clearly substantiate this interpretation. For example, he names[5] the fact that "the ground is a meadow not a pond" the qualitative limit of the meadow.

The demonstration that every reality demands, by its very self-identity, the existence of other realities is applicable to abstract qualities as well as to concrete things: for example 'round,' to be round, must be 'not-

[1] *Werke*, iii., S. 106 *seq.*; *Encycl.*, § 89 *seq.*

[2] *Werke*, iii., S. 109 *seq.*; *Encycl.*, § 91.

[3] *Werke*, iii., S. 113 *seq.*; *Encycl.*, *ib.*

[4] *Encycl.*, § 24. *Cf.* J. McT. E. McTaggart, MIND, N.S., vi., 1897, 173[2].

[5] *Encycl.*, § 92[2].

rectangular,' and the 'good' is of necessity the 'not-bad'. A parallel set of categories, discussed only in book ii., is applicable, however, only to the concrete thing and never to the single quality. These are the categories of Likeness and Unlikeness. A thing, Hegel teaches, implies other things not only because its identity with itself is a difference from others, but also because it is always 'like' some other things and 'unlike' others. The definition of a thing is always, in truth, an enumeration of the ways in which it resembles some other things and differs from others still. The crab-apple, for instance, is like the cherry in form, like the pear in surface, like the peach in colour, and thus unlike pear and peach in form, unlike cherry and peach in surface, and unlike cherry and pear in colour. Hegel shows in detail how the categories of Likeness and Unlikeness proceed from those of Identity and Difference. Each of them, it is made clear, involves partial identity and partial difference: "Difference as an identity of the objects related is Likeness; as non-identity of them is Unlikeness".[1] For example a rose which is like another has perhaps identity of colour but difference in form, and indeed could never be called 'like' unless in some sort distinct. Thus, likeness and unlikeness, as well as identity and difference, are seen to imply the existence of related others; and it is therefore plain that ultimate reality can never be stated in terms of any one quality or thing.

The argument from identity and likeness is repeated in book iii., but in terms which greatly lessen its force. Hegel expressly admits the equivalence of those categories of book iii. with those of book ii: "Universal, particular and individual,"[2] he says, "are, taken in the abstract, the same as identity, difference and ground". Universality thus means the likeness of one thing to another by virtue of the fact, that they share each other's qualities: particularity is the unlikeness of one thing to another, that is, its failure to share certain qualities; and the individual, like the thing, is the complex of qualities.

This parallelism is, it must be confessed, much obscured by the title of the first division of book iii., "The Subjective Notion". For this term applies most naturally to realities of consciousness and not to mere qualities and things. But no attentive student can escape the force of Hegel's reiterated teaching that 'subjective' does not mean 'conscious' and that the terms 'notion' and 'judgment' apply to external as well as to internal facts.[3] "All things," he says, "are a judgment:"[4] and his discussion of judgments is closely parallel to his consideration, in book ii., of things.

In brief, the argument of this part of book iii. runs as follows: An individual is necessarily described in terms of its resemblance to other individuals. This likeness to others is of various degrees and forms, but the fewer and the less essential the resemblances—that is, shared qualities—the more incomplete and inadequate the description of the individual. In other words, the individual consists of its shared qualities: in its very nature, it implies the existence of others. The single, unrelated individual is, therefore, impossible.

In detail, these different sections consider the nature of the resemblances of one individual to others. These likenesses may be sensational (in the Qualitative Judgment), relational (in the Judgments of Reflexion

[1] *Encycl.*, § 117; *Werke*, iv., S. 41. *seq.*

[2] *Encycl.*, § 164[2]; *cf. Werke*, v., S. 35.

[3] *Cf.* McTaggart, MIND, N.S., vi., 1897, 166.

[4] *Encycl.*, § 167[1]; *cf. Encycl.*, § 181; *Werke*, v., 115[2]; *cf.* also Kant, *Kritik d. reinen Vernunft, Transc. Analytik*, § 19.

and of Necessity), or notional (in the Judgment of the Notion). A bronze, for example, is brown, is useful as a lamp-holder and is also beautiful. But however unessential or essential the resemblances, and however few or many, they inevitably connect the one individual with others.

It should be added, that these sections on the judgment are greatly confused by Hegel's Homeric tendency to lose the thread of his argument while following out the labyrinthine turns of a figure of speech. His effort is to complete the analogy of the individual, as complex of shared qualities, with the judgment, as composed of universal and particular, by referring to every form of proposition and syllogism. His procedure leads to petty distinctions, to meaningless refinements, and to actual inconsistencies. The term 'particular,' for example, readily applicable to the distinguishing or 'unlike' feature of an individual, has no meaning as the name of a minor proposition. Similarly, the term 'universal,' after doing duty as synonym for 'like,' ought not—of a sudden—to gain the meaning 'absolute'.

The study of this first division of Hegel's argument, in all three books of the Logic, suggests, finally, the questions: Is the theory which he opposes ever seriously applied? Has anybody ever believed or thought that ultimate reality is identical with any single quality or composite of qualities? It may readily be admitted that Hegel's illustrations are, indeed, extreme examples of the single and isolated reality. But though nobody claims for any single quality of a concrete thing, or for the complex thing itself, the position of final reality, it is clear that dualistic materialism regards matter as co-existing with spirit and yet as possessing ultimate reality; and that dualistic spiritualism assigns to spirit this same anomalous and impossible position of an ultimate reality which has some other reality external to it.

In opposition to the doctrine of ultimate reality as limited, Hegel has now a second argument. It may be stated thus:—

2. *Ultimate Reality is not one limited reality among others, for every such reality is dependent on others.*—In the sections already outlined, Hegel has shown that because every limited reality is itself and not another, and because every complex is like and unlike others, therefore no such limited quality or thing can be looked on as final reality. He now goes on to show, that the limited reality, besides implying others, is dependent on them, that is, of necessity connected with them. In other words, no supposedly independent reality can make good its claim to independence. Not only does every quality or thing imply the existence of others, but it is actually connected with these others, inextricably bound up with them and dependent on them. For every thing or individual is acknowledged to be either a cause or an effect: as such, however, it simply is not independent, since—by virtue of its being cause or effect— it is 'connected.' In Hegel's own words:[1] "Cause and effect are conceived

[1] *Encycl.*, § 153[3]; *cf. Werke*, iv., 218[2].

as two separate existences . . . only when we leave the causal relation out of sight".

Important as it is, this argument never receives detailed consideration, doubtless because it substantially repeats Kant's causal theory, which was common property of metaphysicians when Hegel wrote the Logic. Hegel therefore devotes his main effort to the demonstration of the seeming paradox: self-identity implies the existence of others. The argument from causal connexion is barely suggested in book i., in the treatment of infinity as an indefinite series of temporally connected finites,[1] and in book iii., under the section on "Mechanism". It is distinctly, but very briefly, considered in book ii., in the discussion of Cause and Effect. These categories and their parallels—Condition and Conditioned, and Possibility and Actuality (in one use of these last two terms)[2]—are categories of connexion. Like Identity, Difference and the others they do not characterise either Essence—Unknowable Reality—or Appearance regarded as illusory manifestation of Essence, but are applicable, rather, to things in their relation to each other. No single, exclusive entity or reality—this is Hegel's teaching—can be in itself ultimate or absolute reality, because it is in necessary connexion with other realities, and thus is dependent upon them instead of being self-sufficient.

The force of this argument is weakened, in Hegel's statement of it, in several ways. In the first place, he sometimes seems to use the expression 'cause and effect' as mere synonym for 'substance and accident,' that is, for 'essence and appearance'.[3] In the second place, Hegel, like Kant, does not realise the partial identity of the conceptions of time and causality.[4] Finally, because of this incomplete analysis, he confuses mutual causality with reciprocity (in the narrower sense). Both Kant and Hegel, it is true, make use of the term 'reciprocity,' but mean by it merely a reciprocal causality—in which, as Hegel says, "there is only one and the same thing, *viz.*, one cause and another and their connexion with one another".[5] Kant illustrates this mutual relation from the influence of heavenly bodies on each other;[6] Hegel exemplifies it by the reciprocal relation of the "character and manners of a nation" and its "nature and laws,"[7] observing that either side may be regarded either as cause or as effect, that is, that the manners affect the laws but are also affected by them. This reciprocal influence is, however, a mere involved and doubled form of causality. Neither Kant nor Hegel discusses the necessary but non-temporal form of dependence—Schopenhauer's *Grund des Seins*—which is best named reciprocity. The relation, for example, of mathematical quantities to each other is reciprocity, in this more definite sense. Like causality (the temporal form of necessary

[1] *Werke*, iii., S. 146 *seq.*; *Encycl.*, § 92 *seq.*

[2] *Encycl.*, § 146, note; *Werke*, iv., 221^1. Hegel sometimes, however, uses 'possibility' and 'actuality' as mere equivalents for 'essence' and 'appearance' (*cf. Encycl.*, § 145, note; *Werke*, iv., 202^4). In other contexts, the opposition seems to be that of the purely imaginary to the real (*cf. Encycl.*, § 143, note).

[3] *Cf. Encycl.*, § 152; *Werke*, iv., 216^2.

[4] *Cf.* an article, by the writer, on "Time as Related to Causality and to Space," in MIND, N.S., April, 1899.

[5] *Encycl.*, § 154^2. [6] *Critique of Pure Reason*, Third Analogy.

[7] *Encycl.*, § 156, note.

connexion), the relation of reciprocity involves the dependence of all exclusive realities on each other.

Hegel has shown that the single, exclusive reality, however significant, is not the ultimate, or final reality. For it is self-identical and thus implies others; and it is furthermore necessarily linked to others and is thus dependent on them. In its most intimate nature, therefore, it contains the implication of others and the connexion with them. The demonstration of the fundamental doctrine of Hegel's system is thus completed, and he enters upon the discussion of his second important teaching. It may be formulated thus:—

b. Ultimate Reality is not a composite of all individual realities: it is neither an aggregate nor a system.

The argument on which Hegel lays most stress is simply the following: Ultimate, or final, reality must be complete; if it fail to include every scrap and shred of actuality, there is something outside and beyond it: it is then no longer ultimate. But if ultimate, or—as we now see—complete, reality be simply a composite, it must be made up of an infinite number of parts; it must include, in other words, every single aspect of reality which exists now in every corner of every world; it must, indeed, include every reality which is, which has been or which is to come. Such an infinity would be, however, unknowable and incalculable; whereas ultimate reality has been shown to be knowable. It follows that no knowable composite could be complete, and therefore that no composite could fulfil the conditions of ultimate reality. The reasoning is, of course, that which Kant had introduced, in his doctrine of the Antinomies, though the method is Hegel's. The conception of a composite of an infinite number of parts is developed until it discloses its own contradictions and shows itself as in truth inconceivable and unknowable. But besides showing that a Complete, or Ultimate, Reality, if composite, would be unknowable, Hegel furthermore insists that it would be impossible. Two forms of this doctrine of the Ultimate, as mere composite, are logically conceivable. The first of these theories holds that ultimate reality is a bare, but complete, plurality—that is, a composite of individuals which are distinct and unconnected. The argument which Hegel opposes to this view is precisely that by which he has proved that ultimate reality is not any one unconnected individual: A plurality of unconnected individuals, however complete, is even more obviously impossible than a single unconnected reality, for every one of

these so-called single and independent realities is not only self-identical and like others, but is also either cause and effect or in reciprocal relation: in other words, the bare plurality turns out to be a system of related reals.

The second form of the composite reality theory is incomparably more important than the first, for it wears the specious semblance of a theory of unity. It is the conception of ultimate reality, not as an aggregate of unconnected individuals, but as a Whole—a unity of inter-related parts. Fichte's Absolute Ego, which turns out to be the system of inter-related egos, and, indeed, every conception of the universe as the organic unity of independent but related selves is an illustration of this theory. Such doctrines of an apparent unity—really, as he affirms, a plurality—Hegel invariably opposes by the explicit teaching that ultimate reality is not a whole of parts, but logically prior to the parts and itself the relating principle. But, incredible as it seems, Hegel never carefully considers this significant and historically important theory of ultimate reality as a system of co-ordinate parts. Instead of assuming its validity, analysing its implications and making it disclose its own weakness, he rarely, if ever, frames a serious argument against it. To the writer, this neglect is, beyond doubt, the greatest and the most inexplicable defect of Hegel's Logic.

There is not lacking, however, though Hegel never made adequate use of it, a demonstration, quite in the spirit of Hegel, of the fallacy of this theory of reality as an inclusive whole of co-ordinate, inter-related individuals. For what, it may be asked, is the whole? It may be defined, perhaps, as a sum of the relations of the distinct, yet connected parts. What, then, is the relation? It cannot, in the first place, be external to the parts which it relates, else it would be itself another form of reality and would need to be related with all the rest; and the new relation would again need relating, and so on *ad infinitum*.[1] And yet, though relation cannot, thus, be other than the related individuals, it cannot, on the other hand, be merely an attribute of one or more of these individuals, else the whole of connected realities would be merely that plurality of distinct and unrelated individuals. There is no escape from this difficulty except in the conception of a whole which is also a singular; and this

[1] *Cf.* Bradley, *Appearance and Reality*, p. 32. "How the relation can stand to the qualities is . . . unintelligible. If it is nothing to the qualities then they are not related at all. . . . But if it is to be something to them then clearly we now shall require a new connecting relation."

is the conception of an Absolute whose nature is manifested in the parts so that their relation is just the fact of its oneness.

It must be borne in mind that though Hegel does not employ this argument, he does most unequivocally and repeatedly affirm its conclusion. No assertion of Hegelian metaphysics seems to the writer more neglected and more significant than precisely this affirmation of the individuality of the Absolute Whole of Reality. If Hegel's Absolute be interpreted, as it so often is, as a mere system or whole, then Hegel's idealism advances upon Fichte's only in one particular, the complete expulsion of the *Ding-an-sich*, and Hegel's Absolute is essentially no other than Fichte's Ego. But only an artificial interpretation of Hegel's unequivocal statements can—in the opinion of the writer—leave one in doubt of his own conviction that Ultimate Reality is no whole, or aggregate, or system, but a One.[1]

The outline which follows groups together the arguments for this conception of ultimate reality, including—for the sake of completeness—arguments which Hegel merely suggested but never explicitly used:—

Ultimate Reality is not a complete composite, but a One, for

A complete composite is unknowable.

A composite can not be ultimate, since it is

either: A bare, un-related plurality (impossible, because every single is like and dependent),

or: A system (impossible, because the sum of likenesses is an Absolute One

,, ,, dependences ,, ,, ,,).

From this summary of Hegel's argument, we must turn to a closer study of Hegel's text. This text-commentary will indicate that the argument, as just presented, does not at every point follow Hegel's order.

The General Argument in Books I. and III., against the Theory of Ultimate Reality as Composite.

Hegel argues, in every Book of the Logic, for the absolute unity of reality. The most general discussion is found in book i., in the sections on "The One" and "Being for Self". In these sections, the emphasis falls on the demonstration that an ultimate reality must be utterly

[1] The best interpretation known to the writer, of Hegel's Absolute as an organic system of selves, is that of McTaggart. It is dangerous to differ from so close a student of the Hegelian text; but where the question is of Hegel's meaning, there is no choice save to follow Hegel's words rather than those of the critic. *Cf.* a review, by the writer, of McTaggart's "Studies in Hegelian Cosmology," in the *Philosophical Review*, March, 1903.

complete and entire, and that a complete, composite reality is inconceivable. The One is defined as reconciliation of the opposition between Finite and Infinite. By the Finite, is meant the Somewhat, the single reality, and by Infinity, Hegel means to indicate that whatever the number of actual realities, any particular Somewhat is other to each of the other realities and so related to each of them. 'White,' for instance, is not-black, not-coloured, not-sour, not-square, not-just and so on. Its nature is the negation of an indefinite number of other qualities; it is not itself ultimate reality because it implies all these others and requires an endless enumeration of them all in order to its own definition. But the very endlessness of this infinite plurality, Hegel teaches, is a bar to its ultimateness; and the only reconciliation of the two is by the conception of an underlying One. This Absolute One is not made up of the specious Infinity (*schlechte Unendlichkeit*), or Many, but includes the Many, and differentiates itself into them, so that it is a Being-for-Self as well as a One—that is to say, a True Infinite. Or, in Hegel's words: "The One forms the pre-supposition of the Many; and in the thought of the One is implied that it explicitly makes itself Many".[1] The fact of there being many, Hegel names Repulsion;[2] the fact, that these many are nevertheless alike, in that they are parts of the One, he names Attraction. This physical metaphor is greatly overworked, especially in the larger Logic—never, however, so much as entirely to obscure its real meaning. The significant feature of the doctrine is the conception of complete reality as more than bare aggregate and more even than mere whole of co-ordinate parts—as, in truth, a One which manifests itself in its parts.

The most important criticism of these closing sections of book i. concerns Hegel's varying use of the categories Finite and Infinite. He makes (1) the opposition, fundamental to his argument, of the Finite—that is, the single unit—to the Specious Infinite whether temporally[3] or non-temporally regarded. He furthermore (2) contrasts the Specious Infinite with the True Infinite—equivalent to Being-for-Self, or One.[4] But he utterly obscures the force of his argument when (3) he lays stress on a third opposition, the contrast between the Finite, conceived as the Here-and-Now, and the Specious Infinite, regarded as the Beyond (the Jenseits).[5] This contrast is certainly significant, but is out of place at this point in the argument, since Finite and Infinite, in this meaning, are, once more, no other than the constantly reappearing categories of Appearance and Essence.

The argument just outlined, reappears in book iii., under the heading Syllogism. There is, however, this difference, that Hegel passes at once, in book iii., from the theory of ultimate reality as a single individual, to the conception of ultimate reality as a system of related parts, ignoring the hypothesis—refuted in book i.—that final reality is a plurality of distinct and unrelated parts. Moreover, in book iii., Hegel lays special stress on the likeness of the parts which make up the supposedly complete composite of reality. In the sections on 'Judgment' which immediately precede, Hegel has shown that ultimate reality can never be identical with any one individual, since the fact that the individual is simply a bundle of likenesses and unlikenesses implies always the exist-

[1] *Encycl.*, § 97, note; *cf. Werke*, iii., S. 182^3, 175^1.

[2] *Werke*, iii., 189^1, *Dass viele Eins seien, ist die Repulsion selbst; cf. Encycl.*, § 98.

[3] *Werke*, iii., 140^1; *cf. Encycl.*, § 92 *seq.*

[4] *Encycl.*, § 95^3. [5] *Werke*, iii., 143 *seq.*; *Encycl.*, § 95^2.

ence of other individuals. At this point, the new conception emerges: ultimate reality is a syllogism, namely, a system of related individuals, bound together by ties of universality, that is, of likeness.[1] Or, in Hegel's own words: "Everything is"—turns into, is seen to imply—"a syllogism".[2]

The system of like realities, however, as Hegel proceeds to show with great elaboration, that is, this system of individuals connected through universals, must be a complete system, if it is to be indeed ultimate reality. Upon this point, here as in book i., Hegel lays great stress. Under the misleading title, "Qualitative Syllogism," he shows clearly that one group, among several, of resembling individuals can no more constitute fundamental reality than any one of the individuals. For the common quality on which this system is based will be, in the first place empirically observed[3] and very likely unessential; and it will, of course, be one quality only among the many qualities of each one of the individuals in the system, so that the system will not adequately represent the individuals composing it. Thus, the rose, because red, is a coloured object; but if ultimate reality be defined as the totality of coloured objects, such a system does not even truly represent the rose, for a flower has other qualities than colour.[4]

It is quite evident, therefore, that the system, or universality, of like objects, so long as it remains incomplete, implies the existence of still another incomplete system, and that these incomplete systems have to be linked together in a complete totality, or, as Hegel calls it, a Syllogism of Allness. This complete system of distinct individuals bound together by all conceivable resemblances, however complex and intricate the combinations, is, thus, the only sort of whole-of-resembling-parts which meets the requirements of ultimate reality.

We have before us, therefore, in obscure terminology but in unmistakable outline, the theory of ultimate reality as the complete whole of all realities in perfect relation of likeness. But the conception involves an inherent contradiction. The very completeness which is its distinctive feature is impossible unless the unity be more than that of a mere sum or whole. For, as Hegel proceeds to show—under the heading "Syllogism of Reflexion"—such a complete sum, or syllogism of allness, is contingent and unknowable, because it is an affair of mere induction or of analogy.[5] Clearly, therefore, if ultimate reality were a mere All, it

[1] Hegel sometimes uses the term 'syllogism' of any whole of parts, and not merely of the whole of like parts (*cf. Werke*, v., 191[2]; *Encycl.*, § 197). But the latter is the usual meaning of the term.

[2] *Encycl.*, § 181[2]; *cf. Werke*, v., 122[1].

[3] *Encycl.*, § 184; *cf. Werke*, v., 118 A., *seq.*

[4] *Encycl.*, § 184: "The Middle Term being an abstract particularity is nothing but any quality whatever of the subject; but the subject being immediate and thus empirically concrete, has several others and could, therefore, be coupled with exactly as many other universalities as it possesses single qualities" (*cf. Werke*, v., 123).

[5] *Werke*, v., 150 *seq.; Encycl.*, § 190, note: "The syllogism of Allness hands us over to the syllogism of Induction . . . that presupposes that over a certain region observation and experiment are complete. But the things in question here are individuals; and so again we are landed in the progression *ad infinitum*. In other words, in no induction can we ever exhaust the individuals. Every induction is consequently imperfect." In the still more imperfect "Syllogism of Analogy," we conclude from the

would be definitely unknowable. No one can completely enumerate every individual reality, and without such enumeration, no All can be conceived. But ultimate reality has already been shown to be knowable, to be within experience and not beyond it. Its completeness, therefore, must be of a sort which needs no impossible enumeration, and the absolute whole of like parts—the Syllogism of Necessity, as Hegel calls it—must be an Absolute Individual, not a system.

This is the only reasoning by which Hegel opposes the theory that ultimate reality is a complete whole of co-ordinate like parts. He fails, as we have already indicated, to make use of a far subtler and more fundamental form of argument,[1] by which he might have established the truth that the Absolute One is an Individual. But however incomplete his argument, Hegel never falters in his affirmation of the doctrine. In book i., he defines ultimate reality as Being-for-Self, a One which is "just self-exclusion and explicit putting of itself as Many".[2] Even more clearly, in book iii., he substitutes for the false conception of the complete whole of co-ordinate parts the conception of ultimate reality as Absolute Individual, "a totality of its particular members and . . . a *single particular or exclusive individuality*".[3]

The Arguments, in Books II. and III., against the Theory of Ultimate Reality as a Composite of Interdependent Parts.

We turn now to Hegel's discussion of ultimate reality as a composite of parts, whose interdependence is emphasised. The consideration of ultimate reality as composite of interdependent parts, though suggested in book i., is first definitely brought forward by the sections on Action and Reaction, Necessity and Freedom at the end of book ii. In this discussion, Hegel no longer lays stress on the impossibility of conceiving a composite as complete.[4] Instead, he insists on the more fundamental doctrine that no mere composite, however complete, can be ultimate. To appreciate both the rigor and the defect of his argument, we must once again distinguish the two forms of composite reality: (1) the plurality of distinct and independent parts, and 2) the system of inter-related and mutually dependent parts. Hegel's argument directs itself against the first of these conceptions, the hypothesis of the bare and unrelated plurality of absolutely independent individuals. He has virtually already refuted this theory by showing that each term in the plurality is closely related to each of the others.[5] Now he points out, with specific application to the plurality, that causality is a universal relation; that every limited reality is itself both cause and effect; and that this interconnexion annihilates the independence of all, as well as of each, of the parts.[6]

This unimpeachable argument, however, proves only what almost every pluralist would admit: the impossibility that ultimate reality is a mere aggregate of unrelated units. The argument does not, on the other hand, affect at all the deeper pluralist conception, of ultimate reality as the unity of all limited realities in a complete and closely articulated

fact that some things of a certain kind possess a certain quality that the same quality is possessed by other things of the same kind. *Cf.* the similar teaching, under the heading 'Judgment of Reflection,' *Encycl.*, 175[1].

[1] *Cf.* p. 328. [2] *Encycl.*, § 97[2]; *cf. Werke*, iii., 179[4], 187[2].

[3] *Encycl.*, § 191; italics mine.

[4] For mere suggestion of this argument *cf. Encycl.*, § 156[2].

[5] *Cf.* B, I., *a.*, p. 322 *seq.* [6] *Encycl.*, § 153[3].

system of related parts. But though he directs no specific argument against it, Hegel certainly rejects this conception of ultimate reality as a system of connected parts, and definitely adopts the hypothesis of ultimate reality as an Absolute One, or Individual—the Notion manifesting itself in the parts and itself constituting their relation. "To understand," he says, "the relation of action and re-action, we must not let the two sides rest in their state of mere given facts, but must recognise them . . . for factors of a third and higher, which is the Notion and nothing else."

The second section of book iii., miscalled "The Object," repeats the discussion of ultimate reality as composite of interdependent parts. The discussion in book iii. is, however, more convincing than that of the preceding book. Ultimate reality as plurality of independent parts, is described under the heading "Formal Mechanism"[1] as a "unity of differents, . . . a composite, an aggregate," in which the relation is conceived as external and foreign to the individuals related, so that "[they] remain independent and . . . external to each other".[2] The inner contradiction of this conception is shown by the old argument: such independence is impossible, since all facts are causally related. That is to say, ultimate reality is not a Formal Mechanism, or plurality of independent parts, but rather a related composite—in Hegel's terms, Mechanism with Affinity; and this composite, to be ultimate, must be a Complete or Absolute Mechanism—an ultimate unity or system of inter-related parts. Moreover, even this hypothesis, of ultimate reality as complete system, or mechanism, is rejected by Hegel. His arguments, however, affect only the old, discredited theory of Formal Mechanism, the plurality of unrelated parts. He might readily, as we have seen, disprove the Absolute Mechanism theory, the hypothesis of a complete unity of inter-related parts, by closely analysing the conception. How, he might ask, can realities which are many be, at the same time, connected—that is one? It is impossible to reply that the causal or reciprocal relation makes the many into one, for—conceived as an independent reality—the relation is itself one of the many and in need of unification.[3] The unity of the many is, therefore, possible only as they participate in a deeper reality, in a One which underlies and includes them, instead of being made up by them. The interdependence of the many, thus, is not ultimate reality, but is, rather, a relatively superficial aspect of the fundamental unity of the Absolute Individual.

II. ULTIMATE REALITY IS SELF.

The conception of ultimate reality as Absolute One, leaves unanswered the question: What is the nature of this absolute individuality, this self-determining, self-differentiating One; what is it really, actually, concretely? Hegel answers this question by the assertion: The Absolute is Idea—that is Self. This conception is, indeed, inevitable, given the earlier conclusions of Hegel's argument. It is evident, first of all, that the Absolute One is consciousness; for consciousness is the only reality immediately experienced—a reality to which

[1] This exposition follows the order of categories in the *Encyclopædia*, and does not take into account the sections on "Chemism" and "Teleology"—mere illustration from the domain of chemistry and of organic life of the inadequacy of the aggregation-theory of ultimate reality.

[2] *Encycl.*, § 195; *cf. Werke*, v., 175. [3] *Cf.* p. 328, above.

even so-called material phenomena reduce. Therefore, consciousness is at least one form of reality, so that if, as Hegel has proved, ultimate reality is an absolute One, the nature of that Absolute must be consciousness. But an Absolute Consciousness is an Absolute Self. For the only alternative conception of the Absolute Consciousness is that of an organic unity of inter-related selves, and this theory is untenable because Hegel has shown that the Absolute is a One, an Individual, not a system. Thus, the absolute, self-centred, self-differentiating One, which is also consciousness, can be none other than Absolute Self, Absolute Personality—in Hegel's term, Absolute Idea or Spirit.

This is the underlying argument of the last division of Hegel's Logic. He neglects, as already discredited, the hypothesis of ultimate reality as identical with inorganic matter and proceeds at once, in the section on "Life," to show that ultimate reality cannot be conceived as organic nature. This conclusion leads, therefore, to the theory that reality is (or includes) consciousness. Hegel, therefore, considers, under the heading "Cognition in General,"[1] the conception of ultimate reality as finite consciousness. He shows that the finite self is always confronted by a world external to it, so that ultimate reality, if the finite self were an ultimate part of it, would be a world of co-ordinate and related realities, whereas it has been found to be an absolute One. It follows, Hegel indicates, that ultimate reality, though of the nature of consciousness, lies deeper than the finite selves. Evidently it can be none other than the Absolute Idea or Self.

Even from this bare outline of the closing section of the Logic, it appears that Hegel has virtually omitted certain essential portions of his argument. A careful reading of the text, especially in the less adequate version of the *Encyclopædia*, discloses wide digressions and frequent over-elaboration of unimportant details. As it stands, the closing division of book iii. has indeed almost the force of an independent argument, rather awkwardly combined with what precedes; and its essential teaching, that ultimate reality is a Self, certainly is not as logically developed or as rigorously treated as the doctrine that ultimate reality is an Absolute One, that is an Absolute Individual. From a historical standpoint, however, the disproportion may be readily understood.

[1] *Encycl.*, § 223. The heading in the larger Logic is "Die Idee des Erkennens" (*Werke*, v., 255).

Fichte and even Schelling (in some periods of his thought) assert unequivocally that all reality is of the nature of consciousness. But because they failed, lavishly as they used the word 'absolute,' to realise the self-centred unity which makes up the conception of absoluteness, therefore they did not attain the culminating doctrine of the Absolute Consciousness as an Absolute Personality. Fichte is therefore correctly represented as teaching that God, or the Absolute, "exists only in the consciousness of thinking men".[1] It is Hegel's great achievement to substitute for this theory of reality as a connected system of finite selves, the doctrine of an Absolute Self, whose and who is all reality. This Absolute Spirit, he teaches, is self-differentiated into the rich variety of the world of nature and of finite spirit, yet is always conscious of itself as distinct, not separate, from these lesser selves and these natural phenomena. In enforcing this conclusion, Hegel had, however, little need to argue for the conception of ultimate reality as consciousness, since this had been abundantly demonstrated by his predecessors. This part of his doctrine, therefore, is more broadly treated and less severely argued. On the other hand, only by the close logic and the constant repetitions of his argument for an Absolute which is neither aggregate nor system, but in the strictest sense a unity, could Hegel transmute the unsatisfactory ambiguity of Fichte's teaching that the Absolute which explains the world of finite selves is itself simply the sum of these finite selves, into the doctrine of a personality which yet is Absolute. "The highest, extremest Summit," he says, "is pure Personality, which alone, through that absolute dialectic which is its nature, encloses and holds all within itself."[2]

A closer study of the text will emphasise Hegel's conclusion.

a. The nature of Ultimate Reality is not adequately conceived as life.

As has been noticed, this section should logically have been preceded by a discussion of the hypothesis: ultimate reality is mere inorganic matter. The omission is accounted for, historically, by the fact that materialism of the mechanical form had long been superseded, whereas organic nature was often tacitly excepted, even by idealists, from the spiritualistic conception of reality. Kant's *Kritik der Urtheilskraft* had suggested the theory, which was firmly imbedded in Schelling's nature-

[1] A. B. Thompson, *Unity of Fichte's Doctrine of Knowledge*, p. 128; *cf.* the "Anweisung zum seeligen Leben," *Werke*, v., 450.

[2] *Werke*, v., 339^2; *cf.* 317^2, 59^2.

philosophy, that the secret of reality is one with the secret of organic nature and there was thus an immediate need for Hegel's critical discussion of this theory. He considers it in the first section of the last division of book iii., and enumerates—by way of introduction—the points in which the conception of life conforms with the conditions, already formulated, of absolute reality. The living organism, he points out[1] is not an aggregate of independent parts, but a one manifesting itself in different members which are related to each other and to the one. In so far, it conforms to the type of the Absolute One; and its special functions, sensibility, irritability and reproduction furnish ready analogies to the various forms of self-differentiation and self-relation of the Absolute.[2]

The initial difficulty which confronts this theory is the necessity for indicating a precise distinction between organic and inorganic, between life and matter.[3] Neither science nor philosophy has ever succeeded in the attempt to define life except by enumerating its material constituents. Evidently, therefore, there is no definable reason for distinguishing between life and inert matter. Therefore, since no one claims that ultimate reality can be stated in terms of inorganic matter, and since life is not known to be other than a form of the inorganic, the attempt to define ultimate reality as life must be abandoned.

Waiving this objection, however, Hegel proceeds to a closer analysis of the conception of ultimate reality as life. It is capable of two interpretations: ultimate reality is either some one living organism or is the succession of such organisms—not the individual, but the race, or type. The first of these hypotheses is obviously inconsistent with the conclusion, already justified, that ultimate reality is no single individual, limited by the existence of other individuals. There is, at first sight, more likelihood that the second form of the theory is adequate. Admitting that the single organism can never be identical with ultimate reality, is it not possible that the life perpetuated through generations—the life, not of the individual, but of the race, the type—may be indeed, the fundamental reality?[4] Hegel puts the question, but, with his cool and penetrating logic, he does not fail to analyse the conception of the life of the race, which Schelling, in his ardour, had uncritically assumed to be ultimate. This race, or type—he asks—what is it? Simply, he answers, a plurality, an indefinitely prolonged procession of living beings.[5] And, since it has been shown already that an organic unity of related individuals is not ultimate reality, the conception of ultimate reality as life of the race must be abandoned.

b. Ultimate Reality cannot be adequately conceived as finite self.

From the untenable hypothesis that ultimate reality is life, Hegel turns to the conception of fundamental reality as finite consciousness.[6] This is of course a dualistic conception, for every finite self is confronted with the opposition of the external world, "the immediate world found ready to hand"[7]—a world of opinions and purposes contrary to its own and a world of things which it has not made.

[1] *Werke*, v., 243[3] *seq.*; *Encycl.*, § 216[1].
[2] *Werke*, v., 246 *seq.*; *Encycl.*, § 218[2].
[3] *Encycl.*, § 219.
[4] *Werke*, v., 252 *seq.*; *Encycl.*, § 221.
[5] *Werke*, v., 254.
[6] *Werke*, v., 255[2]; *Encycl.*, § 222.
[7] *Encycl.*, § 224; *cf. Werke*, v., 265[2].

There are, to be sure, two ways in which the finite self instinctively contradicts this independence of the world, thereby asserting its own self-sufficiency. The first is the way of thought, or cognition, in which it "receives the existing world into itself, into subjective conception,[1] that is, analyses and classifies it. In other words: the fact that the external object can be thought about[2] shows that it is itself the stuff of which consciousness is made. Yet this fact cannot obscure the truth that the activity of finite understanding assumes, always, the existence of something outside itself to be analysed and classified. In truth "the finitude of consciousness lies in the presupposition of a world already in existence".[3]

The second attitude of the finite self to the external world seems at first sight more successful in reducing its externality. For, in Volition, the finite self changes the world and converts it to the ends of the self.[4] Herein, volition is clearly distinguished from cognition, for "while Intelligence merely proposes to take the world as it is, Will takes steps to make it what it ought to be". Yet, even, in volition, the finite self fails to attain ultimate reality, for "as finite it presupposes the purposed end of the Good to be a mere subjective idea and the object to be independent,"[5] that is, it is limited by reality external to it.

So long, therefore, as we define reality in terms of the purely human consciousness, we conceive of reality as a system of which the finite consciousness forms merely one of the related parts. Even—Hegel might well have added—if the external world be a world not of material realities but of other finite selves, ultimate reality, thus conceived, is composite not individual. But it has been shown that ultimate reality, whatever its concrete nature, is Absolute One, not organic unity of parts. The finite self and the reality external to it must then be conceived as parts of a more ultimate reality.[6] And this "identity of the two sides which supersedes them both" can be none other than Will—but no longer merely finite will. The Will, which includes within itself both the finite self and the world external to it, the Will "which knows the world to be its own" is none other than the Absolute Idea or Self—"the absolute and all truth, the Idea which thinks itself . . . and . . . is completely self-identical in its otherness".[7]

It will be well in conclusion to comment on the re-orderings of the categories, required by the preceding interpretation of Hegel's argument. The categories in book i. are unchanged in order, and have been merely interrupted by including parallel or related groups of categories from other books. But certain important omissions from book i. must be briefly justified. The category of Becoming is not, as it claims to be, a synthesis of the first two categories,—Being and Naught—but is rather the universal category of the Logic, the common method by which every category is shown to

[1] *Encycl.*, § 225. [2] *Werke*, v., 270-310; *Encycl.*, §§ 227-232.
[3] *Encycl.*, § 226[2]; *cf. Werke*, v., 267[2].
[4] *Werke*, v., 314[2]; *Encycl.*, § 234[2].
[5] *Encycl.*, § 233; *cf. Werke*, v., 312[2].
[6] *Encycl.*, § 234; *Werke*, v., 316[2].
[7] *Encycl.*, §§ 236, 238[1]; *cf. Werke*, v., 317[1].

involve its opposite and thus to imply a reality deeper than that of itself or of its other. Becoming, which is merely, thus, a name for the dialectic process, might as well be called the synthesis of Somewhat and Other, of Finite and Infinite, or of Essence and Appearance, as of Being and Naught. The true synthesis of Being and Naught, on the other hand, is Determined Being; for since Pure Being and Pure Nothing are shown to be mere fictions the reality implied by each is that of Determined Being. Hegel admits this by the statement "Being Determinate is the Union of Being and Nothing".[1] He virtually admits, also, that Becoming is a universal category, by giving the name to the transition from Somewhat to Other.[2] Indeed, every page of the Logic shows the futility of trying to confine Becoming to any one stage—least of all to an early stage—of the thought development.

The entire neglect, in this reading of Hegel, of the sections on Quantity and Measure is a more serious matter. The attempt to explain it in detail would involve a complicated discussion, but the reasons for the omission are in general the following: the categories of Quantity are substantially parallel with those of the later sections of book i.—the categories of Finitude and Infinity, of One and Being-for-Self. For example: (1) The attributes of Quantity, Continuity and Discreteness are explicitly identified with the Attraction and Repulsion (meaning likeness and difference) within the One.[3] (2) The discussion of Infinite Quantitative Progression differs in no essential respect from the treatment of the subject in the consideration of the Quality-categories, Finitude and Infinity. Finally (3) the discussion of Quantitative Ratio[4] is a close anticipation of the teaching, in book iii., about the inter-relation of syllogisms; and the sections in book iii., as we have seen, are really a continuation of the concluding sections under Quality.

This virtual parallel of the categories of Quantity with those of Quality does away with the alleged necessity of 'reconciling' Quality with Quantity in Measure. The section on Measure, therefore,—in all its confusion of empirical illustration with metaphysical analysis—simply falls away, to the great advantage of Hegel's argument.

The discussion, in book ii. of the Logic, of Reality as Unknowable Essence has been transposed in the present

[1] *Encycl.*, § 89. [2] *Werke*, iii., 115[2].
[3] *Werke*, iii., 204; *Encycl.*, § 100.
[4] *Werke*, iii., 367[2]; *Encycl.*, § 105[1].

arrangement to follow on the consideration in book i. of Undetermined Being. It may be freely admitted that this change of order is not positively required. For the hypothesis, here discussed, that Reality is unknowable might be made at any point of Hegel's argument, and not merely at its beginning. But though the transposition is not strictly necessary, it is, on the other hand, both natural and logical. The destructive analysis of the doctrine of ultimate reality as unknowable Essence is more closely connected with the proof that Ultimate Reality is no Undetermined Being, than with any other section of the Logic,[1] in that both theories would make a positive metaphysics impossible. For this reason, the Essence hypothesis, like the Pure Being theory, appropriately precedes the positive discussions of the Logic.

The transposition of the sections on Identity and Difference, Likeness and Unlikeness would still, however, be imperatively needed, even if the discussion of Essence were left in its present place. As they stand, these categories—Identity and the others—come midway between the categories of Essence and Appearance and the entirely parallel categories of Ground and Consequence. But, as our summary of these sections has shown,[2] Identity, Difference, Likeness and Unlikeness are not relations of unknowable essence to the world of appearance, but rather categories of the connexion of determined realities within the world of appearance. Since, then, it is necessary to dislodge these categories—Identity and the others—from their present position, there can be no doubt that they follow most naturally on the parallel categories, in book i., of Reality and Negation, Somewhat and Other and the rest.

The remaining changes of order suggested in this summary of Hegel's teaching will be readily allowed, when once the need of some change in the present order has been clearly apprehended. Some transposition of the categories is, in truth, demanded by the fact that Hegel's argument, in its present form, has the wholly fictitious and misleading appearance of progress and steady advance from the earliest categories of Being to the final category of Absolute Idea. The truth is, however, that both book ii. and book iii. are largely composed of repetitions, in varied form and terminology, of the categories already discussed. Just because it doubles on itself, without proper warning, the Hegelian argument needs to be disentangled. The changes required consist merely in the juxtaposition of groups of equivalent

[1] *Cf. Werke*, iv., 127. [2] *Cf.* p. 323, above.

categories; and the justification for each change is found—as has been shown—in Hegel's own admission. He himself asserts the equivalence of Identity and Difference not only with the categories of Determined Being, in book i., but with the categories of the Judgment in book iii.[1] He clearly implies the parallelism of the categories of Syllogism with the categories, in book i., of Being-for-Self, or One,[2] and he distinctly affirms the substantial identity of Mechanism, in book iii., with Reciprocity in book ii.[3]

The reconstruction attempted in this paper will, however, fail of its object if it in any wise detract from the value of Hegel's argument. It should, rather, reveal the strength of a system which has triumphed over such difficulties of expression. The idealistic critic may, therefore, re-shape but he never may reject Hegel's proof that ultimate reality is an Absolute Self.

[1] *Cf.* p. 324, above. [2] *Cf.* p. 330, above. [3] *Cf.* p. 333, above.

IV.—ON PRESERVING APPEARANCES.

By F. C. S. Schiller.

The aim of this paper is to examine the nature and scope of the familiar antithesis between "appearance" and "reality," the vogue of which I cannot but regard as the chief constructive result of the work of the greatest of English sceptics, Mr. F. H. Bradley. In Oxford at all events, this antithesis has been an immense success. It is ever hovering on the tongue alike of tutor and of tiro in philosophical discussion, and provides them with a universal solution for the most refractory of facts. It seems to have become the magic master-key which opens—and closes—every door, the all-accommodating receptacle into which every mystery may be made to enter and to disappear, in short it is just now the greatest of the catchwords wherewith we conjure reason into topsyturvydom and common sense out of its senses. If its Olympian author ever deigned to look upon the struggles and contentions of lesser and lower mortals, he would doubtless be vastly amused to see what an Alpha and Omega of Philosophy had sprung invulnerable from his subtle brain. But being myself immersed in the struggle of teaching and having a certain responsibility in seeing to it that what is called thought involves thinking and affords proper training in mental precision and clearness, I find that this antithesis has become to me a considerable nuisance, and also, it must be confessed, a bit of a bore. I propose, therefore, to probe into it a little, and to examine its pretensions, with a view to seeing whether the relation of "appearance" to "reality" cannot be put on a different and, to me, more satisfactory footing.

I.

I must begin however by raising a very general, and, I think, very fundamental, objection to Mr. Bradley's method of constructing the wonderful edifice of his metaphysics. I

venture to assert with the utmost trepidation, and at the risk of being crushed, like the rest of Mr. Bradley's critics, by a sarcastic footnote to his next article,[1] that in putting forward his fundamental assumption that "ultimate Reality" is such that it does not contradict itself, and in erecting this into an absolute criterion, he builds in part on an unsound foundation which has not reached the bottom rock, in part on an airy pinnacle, a sort of what in Alpine parlance is called a *gendarme*, which will not bear the weight of the mountains of paradox which are subsequently heaped upon it.

(1) By the first charge what I mean to convey is that the ultimateness of Mr. Bradley's absolute criterion has been taken for granted far too easily. But before adducing reasons for this contention, I must disavow every intention of impugning the validity of the Principle of Contradiction as such. I accept it fully and without reserve; nay more, I use it every day of my life. But my intellectual conscience impels me to ask—*As what* must I accept it? And in what sense? To these questions Mr. Bradley's criterion of non-contradiction appears to supply no obvious answer. It is enunciated quite abstractly and it is not clear to me that, as stated, it has a sense adequate to bear the metaphysical structure put upon it, or indeed any sense at all.

The meaning of Mr. Bradley's "absolute criterion" (as of everything else) must therefore be sought in its applications. But Mr. Bradley's applications seem to me to warrant the utmost suspicion, if not of the principle in the abstract, yet of the sense in which it is actually used. A principle which asserts itself alone *contra mundum*, and convicts the whole universe of self-contradiction may surely give pause to the most reckless. There is no need, therefore, to question the principle in the abstract: in the abstract it may mean anything or nothing. But in the particular way in which Mr. Bradley proceeds to use it, it is open to much exception, and I find myself unable to admit its claim to ultimateness, while it is obvious that Mr. Bradley has for once simply taken over his allegation from the classical (and intellectualist) tradition of Herbart and Hegel. I shall discuss however only the

[1] Since this was written the anticipated footnote has actually arrived (see MIND, N.S., No. 46, p. 167). It is characteristic, but comparatively mild. Mr. Bradley merely desiderates in me "any serious attempt to realise the meaning and result" of my doctrine. Unfortunately he abstains from enlightening me as to what he takes it to be. In reciprocating his compliment I might perhaps confess that at all events *I* feel quite clear about what might antecedently have seemed more difficult to grasp, *viz.*, the meaning and result of *his* doctrine.

former point, as it is clear that if the Principle of the impossibility of self-contradiction in the Real can be shown not to be ultimate, it will follow that Mr. Bradley was wrong in taking it to be such.

My first question must be to inquire what shall be held to constitute such self-contradiction as will render a supposed reality amenable to the jurisdiction of the absolute criterion? Mr. Bradley appears to hold that any quibble will suffice to bring an aspirant to reality before the revolutionary tribunal of his incorruptible philosophy, and that an unguarded phrase, such as ordinary language can scarcely abstain from, is evidence enough for ordering off to instant execution the wretched "appearance" which had dared to simulate "reality". But surely justice should require some more decisive proof of iniquity than the fact that something which claims to be real can be formulated in what appear to be contradictory terms? For may it not be the contradiction rather than the reality which is 'appearance'? Yet such apparent contradiction is all that Mr. Bradley's negative dialectics seem in the great majority of instances to prove. It is a result which does not astonish me, but seems to be of little value. *In words* everything can be made to look contradictory, and Mr. Bradley has but completed the work of Gorgias and Zeno, with his own peculiar brilliance and incisiveness. But I do not see that this necessarily proves more than that language has not yet been rendered wholly adequate to the description of reality.

And it ought not to be necessary to remind serious thinkers that to dazzle the spectators by a display of dialectical fireworks is not to explain the universe. The most illusory of seeming realities is worthy, not merely of being ridden down and "riddled with contradictions" and left for dead upon the field, but also of being *understood*. And I am at a loss to see how to call it self-contradictory and then immediately to invoke a self-subsistent, inaccessible Absolute, which includes all appearances and transcends all apprehension and inexplicably atones for the incurable defects of our actual experience, is to explain it, or anything else whatsoever.

As against such cavalier methods I should protest that only propositions are properly contradictory, that only a reasoning being can contradict itself, and that it is an abuse of language to describe our use of incompatible statements about the same reality as an inherent contradiction in the reality itself. Indeed I should combat Mr. Bradley's contention that everything sooner or later turns out to be self-contradictory with the axiom that *nothing which exists*, in

however despicable a sense, can really be contradictory. The very fact of its existence shows that the 'contradictions,' which our thought discovers in it, are in some way illusory, that the reality "somehow" (to use Mr. Bradley's favourite word in this connexion) overpowers, swallows, reconciles, transcends and harmonises them.[1] If therefore it appears 'contradictory,' the fault is ours. It is, in Herbart's language, a *zufällige Ansicht*. It can be purged of its apparent contradiction, and it is our duty to effect this and to interpret it into a harmony with itself which our mind can grasp. Only of course I can see that this purification may require something more than a dialectical juggle with terms: we may need a real discovery, we may have to make a real advance, before the refractory ore of "appearance" will yield us the pure gold of "reality".

I have intentionally used a word which seems to me to give the clue out of the labyrinth into which Mr. Bradley has beguiled the fair maid, Philosophy. The conception of *Harmony* seems to me to be one legitimately applicable to ultimate reality and to contain a meaning which I vainly look for in that of 'contradiction'. It forms a postulate higher and more ultimate than that of non-contradiction, which indeed seems to be only a special case thereof, *viz.*, that of a harmony among the contents of our thought. The contradictory involves a jar or discord in the mind, which most people in their normal condition feel to be unpleasant (when they perceive it), and this is the first and immediate reason why we avoid contradictions and reject the contradictory. The second reason is that our *Thinking* rests on the Principle of Contradiction, and that if we admitted the contradictory, we should have (if we were consistent) to give up thinking. But thinking is too inveterate a habit (at least in some of us), and on the whole too useful, to permit of the serious adoption of this alternative.

Thus the struggle to avoid and remove contradictions appears as an integral part of the great cosmic striving towards satisfaction, harmony and equilibrium, in which even the inanimate appears *more suo* to participate.[2] In this struggle the intellectual machinery which works by the Principle of Contradiction plays an important part, and we should fare but ill without its aid.

[1] Unless indeed the internal conflict which is described as a 'contradiction' be the essential nature of all reality as such—as some extreme pessimists have contended.

[2] See MIND, N.S., No. 36, pp. 462-463.

But it is not our sole resource. An apparent contradiction can be cleared out of the road to harmony by other means than a course of dialectics terminating in a flight to an *asylum ignorantiæ*, miscalled the Absolute. (1) I would venture therefore to remind Mr. Bradley of many excellent things he has himself said about the immediacy of feeling. (2) It would seem that in certain modes of æsthetic contemplation the so-called self-contradictions of the discursive reason may vanish into a self-evident harmony. (3) It is well known that our immediate experience enables us to accept, without scruple or discomfort, as given and ultimate fact what philosophers have vainly essayed for centuries to construe to thought. The fact of *change* is perhaps the most flagrant example. But in the last resort our own existence, and that of the world, is similarly inconceivable and underivable for a philosophy which makes a point of honour of systematically denying the factual, and labours vainly to reduce all immediate "acquaintance with" to discursive "knowledge about". And lastly, (4) if the worst should come to the worst, the solution *ambulando*—which in this instance we may translate "by going on" — is always open to a philosophy which has not wantonly insisted on closing the last door to hope by assuming the unreality of "time" (*i.e.* of the experience-process).

For these reasons then I am forced to conclude that Mr. Bradley, in appealing to the principle that the Real is not self-contradictory, has not succeeded in expressing it in its complete and ultimate form. His "absolute criterion" is not the whole, but a part of the greater principle of Harmony. And inasmuch as our experience is plainly not as yet harmonious, it is clear that the principle is a Postulate. We must conceive the Real to be harmonious, not because we have any formal and *a priori* assurance of the fact, but because we desire it to be so and are willing to try whether it is not so.

(2) My second charge can be dealt with more summarily. It concerns the immense disproportion between the foundation of Mr. Bradley's system and the superstructure he has built upon it. Mr. Bradley argues from his absolute criterion to the conclusion that everything which is ordinarily esteemed real, everything which any one can know or care about, is pervaded with unreality, is "mere appearance" in a greater or less degree of degradation.[1] In this Mr. Bradley appears

[1] I cannot here criticise this "doctrine of degrees" as fully as it deserves. It appears to be the only obstacle to our accounting Mr. Bradley's philo-

to carry the policy of 'thorough' to an excess which renders his whole method unendurable. If only he had exempted a few trifles, like religion and morality, from this reduction to illusion, we might have tolerated his onslaughts on the abstractions of metaphysics; as it is there is nothing that can withstand the onset of his awful Absolute.

Now if anything of the sort had happened to a philosophic argument of my own, I should have been appalled. I should have felt that something had gone wrong, that some secret source of error must have sprung up somewhere, or that I must somehow have misunderstood my principle. If the result of my intellectual manipulations of the world had been to convict it of radical absurdity, I should have regarded this as a reflexion, not on the universe, but on the method I had used. I should have felt I had *failed* intellectually, and must try again in another way. I should never have dared to condemn the universe in reliance on so protracted an argument from so narrow a basis. In the last resort I might even have doubted the validity of my principle. I should certainly have doubted its application. Mr. Bradley, apparently, is exempt from any such scruples, but, at the risk of making a deplorable exhibition of the crassest 'common-sense,' I must submit that a system which culminates in so huge a paradox thereby discredits its foundations. And so Mr. Bradley's final Ascension from the sphere of Appearances and Reception into the bosom of the Absolute reminds me of nothing so much as of the fabled 'rope-trick' of the Indian jugglers.

II.

Only a strong conviction of its necessity, together with a habit of outspokenness learnt from Mr. Bradley's own example, could have embarked me on so painful a criticism of the cardinal doctrine of Appearance and Reality. Before

sophy the purest scepticism or rather nihilism, but I cannot but regard it as thoroughly indefensible, and even unintelligible. For, as Mr. H. V. Knox has pointed out to me, it seems impossible even to state it without recurring to a number of the lower categories which Mr. Bradley had previously invalidated. Otherwise the consideration of the different *amounts* of rearrangement required for the "conversion" of "appearances" into the Absolute, of the greater or less *intervals* separating them from it, of the varying lengths of time *needed* to see through an appearance, would seem to be simply irrelevant, and unable to establish the distinctions of kind among appearances which are aimed at. Yet strangely enough, Time, Space and Quantity have themselves been written down as "mere appearances" (*Appear. and Real.*, pp. 362, 364, 369, etc., first ed.).

proceeding from it to the easier and more congenial task of expounding what I conceive to be the real relation of these conceptions, I must however add a word on a point already hinted at, *viz.*, that Mr. Bradley has not really extricated us from that slough of agnosticism, to which their more porcine instincts are ever drawing back even philosophers to wallow. Indeed his facetious remark about Mr. Spencer's Unknowable[1] might, with quite as much propriety, be applied to his own Absolute. For though he has reserved for it the title of Sole and Supreme Reality, it is only used to cast an indelible slur on all human reality and knowledge. It absorbs, transcends, transmutes, etc., all our knowledge and experience. It is therefore quite as unknowable as Mr. Spencer's monstrosity, and adds insult to injury by dubbing us and our concerns "mere appearances". And after all the scorn we have seen poured on the futility of an unknowable reality as the explanation of anything, it passes my comprehension how these consequences of his doctrine should have escaped the notice, I do not say of his disciples, but of Mr. Bradley's own acuteness.

It is useless however to speculate how far Mr. Bradley knows himself to be a sceptic, until he chooses to confess, and I proceed to state what I conceive to be the true relation of reality to appearance. Mr. Bradley's fundamental error seems to me to be his χωρισμός, the separation he has effected between them by violently disrupting their continuity. Once we do this, we are lost. The 'reality' we have severed from its 'appearances' can never be regained, and we remain, as Mr. Bradley holds, enmeshed in a web of appearances, and impotent to attain a knowledge or experience of Reality. But all this appears to be the consequence of a gratuitous error of judgment. We should never have admitted that in grasping a higher reality we were abandoning the reality of the lower. In the ascent to Truth we can never lose touch with a continuous reality. I should liken the advance of knowledge to a severe rock-climb on which we must secure our handhold and our foothold at every step. Rightly used, the rope of metaphysical speculation is an added safeguard which unites the workers at their different posts; it must not be made into an instrument to juggle with. Mr. Bradley on the other hand seems to tell us that we can never reach the summit of our ambitions unless we can throw our rope up into the air and climb up after it into the hypercosmic void.

[1] *App. and Real.*, p. 128, footnote.

We must begin therefore with reality as well as end with it, and cling to it all the way as closely as we can. Unless we do this any ultimate Reality we may vainly imagine will effect no contact with our knowledge and our life, but float off into the Empyrean beyond our ken.

Now the only reality we can start with is our own personal, immediate experience. We may lay it down therefore that *all immediate experience is as such real, and that no ultimate reality can be reached except from this basis and upon the stimulation of such immediate experience.* From this we start; to this, sooner or later, we must in some way return, under penalty of finding all our explanations shattered, like bubbles, into emptiness.

In other words the distinction of "appearance and reality" is *not* one which transcends our experience, but one which arises in it. It does *not* constitute a relation between our world and another, nor tempt us to an impossible excursion into a realm inexorably reserved for the supreme delectation of the Absolute. It always remains relative to our knowledge of our world.[1] And it in no wise warrants any disparagement of "mere appearances". The most transparent of appearances, so long as it exists at all, retains its modicum of reality, and remains, from one important point of view, fundamentally real.

For let us consider how we proceed to ascertain the higher realities which are rashly thought to abrogate the lower. We start, indubitably, with an immediate experience of some sort. But we do not rest therein. If we could, there would be no further question. Our immediate experience would suffice; it would be the sole and complete reality. Appearances would *be* the reality and reality would truly appear. In heaven, no doubt, such would be the case. But our case, as yet, is different: *our* experience is woefully discordant and inadequate. In other words our experience is *not* that of a perfect world. We are neither disposed, therefore, nor able, to accept it *as it appears to be.* Its surface-value will not enable us to meet our obligations: we are compelled therefore to discount our immediate experience, to treat it as an appearance of something ulterior which will supplement its deficiency. We move on, therefore, from our starting point, taking our immediate experience as the symbol which transmits to us the glad tidings of a higher reality, whereof it partly manifests the nature.

The 'realities' of ordinary life and science are all of this

[1] If I am quibbled with I will even say "*my* knowledge of *my* world".

secondary order: they rest upon inferences from our immediate experience which have been found to work.[1] And the process of reaching them is everywhere the same: we experiment with notions which are suggested to our intelligence by our immediate experience, until we hit upon one which seems to be serviceable for some purpose which engrosses us. And then we *declare real* the conception which serves our purpose, nay more real, because more potent, than the immediate experience for the satisfaction of our desire. Only, as life is complex, its sciences are many and its purposes are various; so there will be a multitude of such higher realities conflicting with each other and competing for our allegiance. And, superficially, they will look very different. Nevertheless the ultimate realities of the physicist, whether they be atoms or ions or vortex-rings, have reached their proud position by no other process than that by which the savage has devised the crudities of his Happy Hunting Grounds or the old-fashioned theologian the atrocities of his Hell. They remain on the same plane of interpretation, and all alike are attempts, more or less successful, to supplement some unsatisfactory feature or other in our primary experience.

It is easy to see how from this point we may reach the conception of an *Ultimate* Reality. The 'higher realities' are conceived differently for the purposes of our various sciences and various pursuits, and so there will arise a need for an adjustment of their rival claims, and a question as to which (if any) of them is to be accepted as the final reality. Is the 'real world,' *e.g.*, the cosmic conception postulated by geometry, or by physics, or by psychology, or by ethics? Is it a whirl of self-moving "matter," or a chaos of mental processes, or must we assume a Prime Mover and a Self? Again it is obvious that a higher reality may afford very imperfect satisfaction from some points of view and may have to be transcended by one still higher, and that this process cannot cease until we arrive at the conception of an Ultimate Reality capable of including *and harmonising* all the lower realities. And this, of course, would contain the final explanation of our whole experience, the final solution of our every perplexity.

[1] Of course I do not deny, and indeed in a different context I should even insist, that the assumption of these higher realities *alters* our immediate experience for us. That indeed is the chief proof of their value: assumptions which make no difference are otiose and so invalid. And we should hardly get where we want, if we could not each day start a little higher up.

III.

Thus the struggle to attain a glimpse of such an Ultimate Reality forms the perennial content of the drama of Philosophy. But that struggle is foredoomed to failure, unless we can manage to avoid certain pitfalls and to hold fast to certain guiding principles.

(1) The Ultimate Reality must be made into a *real explanation.* It must *never* therefore be allowed to become transcendent, and to sever its connexion with the world of "appearances" which it was devised to explain. There must always be preserved a pathway leading *up to it* from the lowest " appearances," and *down to them* from the Throne of Thrones, in order that the angels of the Lord may travel thereon. If this be neglected, the ultimate reality will become unknowable, incapable of explaining the appearances, and therefore invalid.[1]

(2) The " appearances " must be really preserved. They must not be stripped of their reality or neglected as mere appearances, merely because we fancy that we have seen *in them* glimpses of something higher. So long as they exist at all, they are real. The world *really is* coloured, and noisy, and hard, and painful, and spacious, and fleeting, notwithstanding the objections of our wiseacres, and there is excellent sense even in maintaining that the earth is flat (some of it) and that the sun does rise and set. Even a nightmare does not become less real and oppressive because you have survived, and traced it to too generous an indulgence in lobster salad.

For (3) it must never be forgotten that the immediate experience is after all in a way *more real, i.e. more directly real,* than the 'higher realities' which are said to 'explain' it. For the latter are inferred and postulated simply and solely for the purpose of 'explaining' the former, and their reality consequently rests for us upon that of the former. Or in so far as the higher realities are more than inferences, they become such by entering into immediate experience and transfiguring it.[2]

The dependence of all ulterior reality upon immediate experience is easy to illustrate. I sit in my armchair and read, what I will call one of the more severely scholastic

[1] It is clear that this objection alone would justify the rejection of Mr. Bradley's Absolute. But, so far as I can understand it, it seems to be constitutionally incapable of complying with any of the conditions I am laying down.

[2] The simplest example of this is the way in which the results of thought attain immediacy in perception.

works on philosophy. There appears to me my friend Jones who has come to tell me that my friend Smith has been arrested on a charge of bigamy and wants me to bail him out. I have no reason to doubt the veracity of Jones or the reality of the situation. I feel therefore the urgent necessity for instant action, and, hastening to the rescue, I—awake with a start! It was all a dream, you will say. On the contrary, I reply, it was all a reality. While I lived through it, the experience was as vivid and real as anything I ever experienced. It is so still: the thought of Smith's bigamy—he happens to be the primmest of old bachelors—still affords me uncontrollable amusement. It is true that I have now modified my opinion as to the order of 'reality' to which the experience belonged. I had thought that it belonged to our common waking world; I now regard it as belonging to a more beautiful dream-world of my own.[1] We see, therefore, how the 'higher' reality depends on the immediate. The reality of Smith, Jones, and the bigamy rested upon and was relative to that of my dream-experience. When my experience changed I was no longer entitled to infer the existence of my previous realities.

The application of this principle is quite general. A change in any particular "appearance" may entirely invalidate the argument for the "reality" which served to explain it in its previous condition; its annihilation would destroy the ground for the assumption of *this* reality; and the annihilation of all appearances would obviously destroy all the reasons for assuming *any* reality.[2] The principle is one of considerable speculative importance, for it enables us to conceive how we should think the reality of a 'lower' to be related to that of a 'higher' world of experience, if and when we experienced such a transition from one to the other. And to Religion, of course, this is a point of capital importance. For unless we can conceive how the higher or 'spiritual' world can transcend and absorb, without negating, the lower or 'material' world, the postulates of the religious consciousness must continue to seem idle fairy tales to the austere reason of the systematic thinker.

(4) The reality of the 'higher reality' must be made to depend throughout on its *efficiency*. This follows implicitly from what we have already established. Immediate experience forms the touchstone whereby we test the *value* of our

[1] And possibly also of Jones, if (as sometimes happens) he also dreamt that he told me the story.

[2] Hence we may say that Mr. Bradley's mal-treatment of "appearances" destroys all "reality".

inferred realities, and if they can contribute nothing valuable to its elucidation, their assumption is nothing but vanity and vexation of spirit. For what started the whole cognitive process was just the felt unsatisfactoriness of our immediate experience : our inferences must approve themselves as specifics against this disease, by their ability to supplement the actual, by the *power* they give us to *transform* our experiences. The transmutation of appearances therefore must not be represented as an inscrutable privilege of the Absolute ; it must be made a weapon mortal hands can actually wield. What will in the last resort decide, therefore, whether an inferred reality really exists or is merely a figment of the imagination, is the way it works, and the power which its aid confers. The assumption, *e.g.*, of the earth's rotundity is 'true,' and preferable to the 'flat-earth' theory, because on the whole it works better and accounts better for the course of our experience. Similarly if I am comparing the merits of the scientific theory that the transmission of light is effected by the vibrations of a hypothetical reality called the 'ether' with those of a more poetic theory that it is due to the flapping of equally hypothetical cherubs' wings, my decision will certainly be affected by the consideration that I can probably discover regular ways of manipulating the ether, but can hardly hope to control the movements of the cherubs.

An assumed reality, then, approves itself to be *true* in proportion as it shows itself capable of rendering our life more harmonious ; it exposes itself to rejection as *false* in proportion as it either fails to affect our experiences, or exercises a detrimental effect upon them. Knowledge is power, because we decline to recognise as *knowledge* whatever does not satisfy our lust for *power*.

It follows (5) that *Ultimate Reality must be absolutely satisfactory.* For that is the condition of our accepting it as such. So long as the most ultimate reality we have reached falls short in any respect of giving complete satisfaction, the struggle to harmonise experience must go on, lead to fresh efforts, and inspire the suspicion that something must exist to dissolve away our faintest discords. We cannot acquiesce therefore in what we have found. Or rather our acquiescence in it would at most betray the exhaustion of despair. To this we might be reduced for a season, but the hope would always rise anew that somehow there was something *better, truer and more real* lurking behind the apparent ultimates of our knowledge. For illustration I need merely appeal to the well-known fact that an "other" world is always conceived as a

"better" world. The absolutely satisfactory alone would rise superior to such doubts. It would be *psychologically impossible* to suspect it of bearing hidden horrors in its breast. The thought is no doubt abstractly conceivable, but a human mind could hardly be found seriously to entertain it. Similarly we might play with the idea of a progress in knowledge which should not only fail to be a progress in harmony, but should reveal fresh horrors at every step, until by the time absolute truth had been reached the cumulative cruelty of what we were forced to recognise as ultimate reality surpassed our most hideous imaginings as far as our knowledge surpassed that of a Bushman. Now I do not for a moment suppose that common sense can be terrified with such suggestions into regarding them as more than the nightmares of a mind distraught, and I venture to think that a pragmatist philosophy can show that common sense is right. For there is a serious fallacy in the notion that the pursuit of Truth could reveal a chamber of horrors in the innermost shrine, and that we could all be forced to acknowledge and adore an ultimate reality in this monstrous guise. If this were truth, we should decline to believe it, and to accept it as true. We should insist that there must be some escape from the Minotaur, some way out of the Labyrinth in which our knowledge had involved our life. And even if we could be forced to the admission that the pursuit of truth necessarily and inevitably brought us face to face with some unbearable atrocity—an undertaking which seems so far to have overtaxed even Mr. Bradley's ingenuity—a simple expedient would remain. As soon as the pursuit of truth was generally recognised to be practically noxious, we should simply give it up. If its misguided votaries morbidly persisted in their diabolical pursuit of 'truth regardless of the consequences,' they would be stamped out, as the Indian Government has stamped out the Thugs. Nor is this mere imagining. The thing has happened over and over again. All through the Middle Ages most branches of knowledge were under black suspicion as hostile to human welfare. They languished accordingly, and some of them, such as, *e.g.*, Psychical Research, are still under a cloud. It is hardly necessary to allude to Comte's drastic proposals for the State regulation of science, and every teacher knows that the Civil Service Commissioners in the last resort prescribe what shall be taught (and how) throughout the land. In short the fact is patent to all who will open their eyes that in a thousand ways society is ever controlling, repressing, or encouraging, the cognitive activities of its members.

And not only would this be done, but it would be an

entirely reasonable thing to do in the case supposed. If the pursuit of knowledge really aggravated, instead of relieving, the burden of life, it would be *irrational*. If every step we took beyond 'appearances' were but an augmentation of the disharmony in our experience, there would be no gain in taking it. The alleged knowledge would be worse than useless, and we should fare better without it. We should have to train ourselves therefore to make the most of appearances, to make no effort to get behind them. And natural selection would see to it that those did not survive who remained addicted to a futile and noxious pursuit. This then would be the worst that could happen; the frivolity and thoughtlessness of the day-fly might pay better than the deadly earnest of the sage. But the day-fly would *ipso facto* have become incapable of assenting to the extravagances of ultra-pessimism.

From the worst possibility let us turn to the best. The best that has been mentioned is that by Faith and daring we should find an experience that would conduct us to the fortunate thought of an ultimate reality capable of completely harmonising our experience. And a merely intellectualist philosophy would have no reason, I presume, to ask for more than this. But just as before we conceived the principle of non-contradiction to be a form of the wider principle of harmony, so now we can hardly rest content with a reality which is merely *conceived* as the ground of complete satisfaction. For so long as it remains a mere conception, it must remain doubtful whether it could be realised in actual fact. To remove this doubt, therefore, our ultimate reality would have *actually to establish* the perfect harmony. By this achievement alone, *i.e.* by returning to our immediate experience and transmuting it into a form in which doubt would have become impossible, would it finally put an end to every doubt of its own ultimateness. But by this same achievement it would have dissolved our original problem. The antithesis of "appearance" and "reality" would have vanished. Ultimate reality having become immediate experience the two would coincide, and we should have entered into the fruition of their union.

Beyond this point even the most speculative of philosophers can hardly be required to advance.[1] I must conclude therefore with a couple of apologies, one to my readers for having taken them from a familiar into so unfamiliar a country, another to Mr. Bradley for attempting a 'transvaluation' of his pet antithesis.

[1] Compare however my article "On the Conception of 'Ενέργεια 'Ακινησίας" in MIND, N.S., No. 36.

V.—SYMBOLIC REASONING (V.).[1]

By Hugh MacColl.

A recent controversy with a certain foreign logician has led me to examine with more care than I had hitherto done the points in which my symbolic logic resembles other modern systems, as well as the points in which it differs from them all. The result has been the discovery that the former are slight and superficial, while the latter are serious and fundamental. So much is this the case that it is hardly an exaggeration to say that no single formula in my system has exactly the same meaning as the formula which is supposed to be its equivalent in other systems. When both are valid, I usually find that mine is the more general and implies the other; when they are not both valid, I invariably find that the valid formula is mine, and the defective formula that of other systems. Examples of this will be given presently; meanwhile let me state the main points of difference.

1. Other logicians generally divide logic into two parts: the logic of *class inclusion* and the logic of *propositions*. Mine is *one simple homogeneous system* which comprises (either directly or as easy deductions), all the valid formulæ of their two divisions, as well as many other valid formulæ which their systems cannot even express.

2. My symbol of implication : they replace by some other, such as $\prec$, or $\Subset$, or $<$, etc. I shall adopt the first of these three throughout as their general representative, it being more easily formed than the second, and less likely to lead to ambiguity than the third. Now, this adoption of different symbols among logicians to express the same idea is a mere matter of taste or convenience, and if their symbol $\prec$ (or its equivalent) really expressed the same idea as my symbol :, I should not mention this circumstance as one of the points of difference. But their symbol $\prec$ *never does express the same idea as my symbol* :.

[1] For IV. see Mind, July, 1902.

3. They use their symbol $\prec$ in one sense in their logic of *class inclusion*, and in quite a different sense in their logic of *propositions*. I always use my symbol : in one and the same sense throughout, and a sense different from each of the meanings which they attach to their symbol $\prec$.

4. Even to the symbol of equivalence = they attach two different meanings; and neither meaning corresponds exactly with that which the same symbol bears in my system.

5. They divide propositions into two classes, and *two only*, the *true* and the *false*. I divide propositions not only into true and false, but into various other classes according to the necessities of the problem treated; as, for example, into *certain*, *impossible*, *variable*; or into *known to be true*, *known to be false*, *neither known to be true nor known to be false*; or into *formal certainties*, *formal impossibilities*, *formal variables* (*i.e.*, those which are *neither*); or into *probable*, *improbable*, *even* (*i.e.*, with *chance even*); and so on *ad libitum*.

6. They make no distinction between the *true* and the *certain*, between the *false* and the *impossible*; so that, in their system, every *uncertain* proposition is *false*, and every *possible* proposition *true*. In other words, *variable* propositions—propositions that are possible but uncertain, propositions whose chance of being true is some proper fraction between 0 and 1—are excluded entirely from their universe. Many of their formulæ are therefore *not formal certainties*; they are only valid conditionally, and this defect, if it does not wholly destroy their utility, restricts within comparatively narrow limits their ranges of application.

7. Implications and other propositions of different *orders* or *degrees*,[1] such as $(A : B) : (C : D)$, $(A : B)^{\epsilon\iota}$, $A^{\theta\theta}$, $A^{\alpha\beta\gamma}$, etc., are not recognised (at least in my sense of the words) in other systems; so that the whole world of new ideas opened up by this exponential or predicative system of notation is a world with which they are utterly unable to deal; the bare attempt on the part of logicians would lead to a general break-up of all the systems now taught and a recasting of the whole of logic on different principles. This would be tantamount to the universal adoption of my system in all its essentials. Human nature being what it is, and professional prejudices being what they are, and what they can hardly help being, such a general recognition of the superiority of my system is hardly to be expected just yet; but I think it will come in

[1] For example my $(A : B) : (C : D)$ means $\{(AB')^{\eta\iota} + (CD')^{\eta}\}^{\epsilon}$, whereas their $(A \prec B) \prec (C \prec D)$ means simply $AB' + (CD')'$, and is therefore *only a statement of the first degree.*

time—after I have dropped into my place among the silent people of the past.

Let me now descend from generalities into particulars.

First with regard to point No. 3. In their logic of *class inclusion* they use the symbol $A \prec B$ to assert that *every individual of the class* A *belongs also to the class* B. In their logic of *propositions* they abandon this definition and use the same symbol to assert that *either* A *is false or* B *true*. I use the symbol A : B in always one and the same sense, namely, to assert that *it is certain that either* A *is false or* B *true*. Hence, when A and B denote each a proposition, we get the following comparisons and definitions :—

$$A \prec B = A' + B = (AB')'$$
$$A : B = (A' + B)^{\epsilon} = (AB')^{\eta}$$
$$A : B = (A \prec B)^{\epsilon};$$

So that my symbol A : B is formally stronger than and implies their symbol $A \prec B$, just as A^{ϵ} is formally stronger than and implies A^{τ}. Thus, my symbol A : B never coincides in meaning with their symbol $A \prec B$, when A and B are propositions.

They use the symbols 1 and 0 to denote *true* and *false* propositions respectively; so that 1 and 0 denote two mutually exclusive *classes* of propositions. Hence, consistency of notation requires that the symbol $0 \prec 1$ should assert that *every false proposition is a true proposition*, which is absurd. But, as a matter of fact, the statement $0 \prec 1$ is supposed in their systems, on the contrary, to be *always true ;* and if we give its second meaning to the symbol $\prec$ and suppose 0 and 1 to be *single propositions* instead of *classes*, the statement $A \prec B$ *is* always true, as it then asserts that either 0 is false or 1 true, which is self-evident.

My symbol $\iota : \tau$, which is erroneously supposed to be equivalent to their $0 \prec 1$, does not lead to this inconsistency; for A : B, by its very definition, means simply $(A^{\tau}B^{\iota})^{\eta}$. Hence

$$\iota : \tau = (\iota^{\tau}\ \tau^{\iota})^{\eta} = (\eta\eta)^{\eta} = \epsilon.$$

Similarly, we get $\eta : \epsilon = (\eta^{\tau}\ \epsilon^{\iota})^{\eta} = (\eta\eta)^{\eta} = \epsilon$.

Though the symbols τ, ι, ϵ, η, θ, as *exponents* (or *predicates*), denote *classes*, each denotes a *single statement* when it is the *subject* of a proposition. Thus η^{τ} asserts that *the impossible proposition* η *is true*, which is absurd. When it is necessary or convenient to distinguish between different propositions of the same class I use *subscripta*. Thus, in the propositions A^B, $A_1{}^B$, $A_2{}^B$, the subject A_1 or A_2 differs from the subject A pretty much as a proper noun differs from a common noun (see MIND, N.S., No. 43). In one or two places in my Sixth

Paper in the *Proceedings of the London Mathematical Society*, I employed the symbol A^B to assert, not (as here) that a certain unnamed individual of the class A belongs also to the class B, but that *every* A belongs to the class B. Subsequent experience however taught me that this convention was inconvenient; so I abandoned it.

Let us now consider point No. 4. In their logic of class inclusion their symbol (A = B) asserts that *every individual of the class* A *is included in the class* B, *and every individual of the class* B *in the class* A. In their logic of propositions this same symbol (A = B) asserts that *the propositions* A *and* B *are either both true or both false*, which is quite a different definition. In my system the symbol (A = B) has neither of those meanings; it always asserts that *it is certain that either* A *and* B *are both true or both false*. Thus, when A and B denote each a single proposition, if we put $(A = B)_\alpha$ for the symbol (A = B) when the latter has *their* interpretation, and $(A = B)_\beta$ for the same symbol when it has *my* interpretation, we get the following comparison and definitions:—

$$(A = B)_\alpha = AB + A'B'$$
$$(A = B)_\beta = (AB + A'B')^\epsilon$$
$$(A = B)_\beta = (A = B)^\epsilon_\alpha;$$

so that my symbol (A = B) is formally stronger than their symbol (A = B), just as A^ϵ is formally stronger than A^τ. The symbol A^τ asserts that A *is true* (true at least in the case considered); whereas A^ϵ asserts that A *is certain* (that is to say, true in all circumstances consistent with our data and definitions).

In their logic of *class inclusion* they use the symbol AB (or its synonym A × B) to denote *the class of individuals common to the classes* A *and* B. With irrefutable logic they then infer that their proposition $A \prec B$ is equivalent to their proposition A = AB. But consistency of notation demands that this convention as to the meaning of AB should hold good also as regards the classes 0 and 1, which (with them) denote false and true propositions respectively. Now, with this interpretation of their symbols, the class 0 we know, and the class 1 we know, but *what is the class* 0 × 1 *common to both?* Where can we find an intelligible and unambiguous proposition that can be described as *both true and false?* False propositions are numerous enough, as we often learn to our cost, and they are usually quite clear and unambiguous; but I have never yet come across an intelligible proposition that could be classed as *both true and false*. Such propositions I denote in my system, not by the symbol ι, which denotes a false but intelligible proposition, nor by the symbol η, which

denotes an intelligible proposition that contradicts our data, but by the symbol 0, which (with me) denotes a *meaningless proposition*. Thus, consistency of notation requires that the formula $(0 = 0 \times 1)$ should assert that *every false proposition is meaningless*, an assertion which we know to be untrue. But with their other interpretation of the symbol = , and supposing 0 and 1 to denote each a single proposition instead of a whole class, their formula $(0 = 0 \times 1)$ is true; for, on this convention, 0×1 will then denote *not* a class of propositions but a single compound proposition which is necessarily false because it contains a false factor 0. If I say "*Henry will go to Paris and Richard will go to Berlin*," and it turn out that Henry does *not* go to Paris, though Richard *does* go to Berlin, I make a *false* statement, though it is perfectly clear and unambiguous. We can neither call it *both true and false* nor *meaningless*. For, by our linguistic conventions, a compound statement is called *false*, if it contains a single false factor.

No inconsistency of this kind, or of any other, will be found in either of my statements $(\iota = \iota\tau)$ and $(\eta = \eta\epsilon)$, as I always use the symbol = in one and the same sense. With me both statements are formal certainties, for

$$(\iota = \iota\tau) = \{\iota^\tau = (\iota\tau)^\tau\} = (\eta = \eta) = \epsilon,$$

$$\text{and } (\eta = \eta\epsilon) = \{\eta^\tau = (\eta\tau)^\tau\} = (\eta = \eta) = \epsilon;$$

the exponent or predicate τ being always understood when not expressed.

In most systems I find the formula

$$(A = 1) + (A = 0) = 1,$$

which, like my formula $(A^\tau + A^\iota)^\epsilon$, is meant to assert that the proposition A is necessarily either true or false. Considering 1 and 0 as single propositions, and adopting the second of their two interpretations of the symbol = , the formula is valid. But with my interpretation of the symbol = , the formula is *not* valid, whether the symbols 1 and 0 correspond to τ and ι or to ϵ and η. For (putting : : for = , to avoid brackets)

$$\begin{aligned}(A = \tau) + (A = \iota) : : \tau &= (A^\tau = \tau^\tau) + (A^\tau = \iota^\tau) : : \tau^\tau \\ &= (A = \epsilon) + (A = \eta) : : \epsilon \\ &= (A^\epsilon + A^\eta)^\epsilon.\end{aligned}$$

This asserts that *it is certain that the statement* A *is either certain or impossible*. Now, this may be true of some particular statement A; but it is not true of *every* statement A, for there are numberless statements (those I call *variables*) that are neither certain nor impossible. In other words, the statement $(A^\epsilon + A^\eta)^\epsilon$ is not a *formal certainty;* so that the formula of which it has been shown to be the simplification is not valid, or is only valid conditionally and within very

narrow limits. If 1 and 0 be represented by ϵ and η respectively, we get the same result.

Now let me deal with points No. 1 and No. 7 and show that, as regards their valid formulæ, other systems are implied in mine; while mine, on the other hand, can work out problems and evolve new and fruitful ideas which their systems are unable even to express. First, as regards their logic of propositions. In my sixth paper on the "Calculus of Equivalent Statements," in the *Proceedings of the Mathematical Society*, I use a symbol ∂x in the following sense. When x denotes a statement A^ϵ, then ∂x denotes A. Hence, when x denotes A^η, ∂x must denote A′, for A^η is synonymous with $(A')^\epsilon$. Also, when x denotes A : B, ∂x must denote their statement $A \prec B$; for A : B means $(A' + B)^\epsilon$, and $A \prec B$ means $A' + B$. Thus my symbol ∂ (A : B) corresponds to their symbol $A \prec B$; and my symbol A : B *would* correspond to their symbol $(A \prec B)^\epsilon$ if they adopted my notation of exponents with my signification of the symbol ϵ. On this understanding all the valid formulæ of their logic of propositions could be transferred from their systems into mine. Also, on the understanding that all *variable* propositions should be left out of account, my A^ϵ would be equivalent to my (and to their) A; my A^η to my A′ and to the corresponding symbol in their notation; and my symbol A : B to their symbol $A \prec B$; while my interpretation of the symbol = would then be the same as theirs. But this arbitrary and unnecessary restriction of our universe of admissible statements would rob logic of nearly all its utility, whether as a practical instrument of scientific research (as in my *Calculus of Limits*), or as an educational instrument of mental training and culture.

The inability of other systems to express the new ideas represented by my symbols A^{xy}, $A^{xy\varepsilon}$, etc., may be shown by a single example. Take the statement $A^{\theta\theta}$. This (unlike *formal certainties* such as ϵ^τ and AB : A, and unlike *formal impossibilities* such as θ^ϵ and $\theta : \eta$) may, in my system, be a *certainty*, an *impossibility*, or a *variable* according to the special data of our problem or investigation. But how could it be expressed in other systems? Not at all, for its recognition would involve an abandonment of their erroneous convention (assumed throughout) that *true* is synonymous with *certain*, and *false* with *impossible*. If they ceased to consider A as equivalent to (A = 1), and A′ (or their corresponding symbol) as equivalent to (A = 0), and employed their (A = 1) as equivalent to my A^ϵ, and their (A = 0) as equivalent to my A^η, they *might* then express my statement $A^{\theta\theta}$ in their

notation; but the expression would be extremely long and intricate. Using $A \neq B$ as the denial of $(A = B)$, as is customary, A^{θ} would then be expressed by $(A \neq 0)\ (A \neq 1)$, and $A^{\theta\theta}$ by

$$\{(A \neq 0)\ (A \neq 1) \neq 0\}\ \{(A \neq 0)\ (A \neq 1) \neq 1\}.$$

This example of translation speaks for itself and renders all formal argument superfluous. Let any one try to express in this notation the formal certainty

$$A^{\theta\theta\epsilon} + A^{\theta\theta\eta} + A^{\theta\theta\theta}.$$

The expression needed would take up several lines, and it would be scarcely possible to extract the intended meaning from the bewildering jungle of symbols in which it would be enveloped.

It remains to show that my system also includes all valid formulæ of their logic of *class inclusion*. Their symbol $A \succ B$ asserts that *every individual of the class* A *belongs also to the class* B. This may be expressed by my symbol A : B on the understanding that the two statements A and B *have the same subject* P, an individual taken at random out of our universe, P_1, P_2, P_3, etc. Thus A : B becomes a mere abbreviation for $P^A : P^B$, which asserts that P cannot belong to the class A without also belonging to the class B, an assertion equivalent to the traditional *All* A *is* B and to their statement $A \prec B$. Thus, as I showed in MIND, January, 1880, and in MIND, July, 1902, the syllogism *Barbara* will become a particular case of my formula

$$(A : B)\ (B : C) : (A : C);$$

in which, let it be observed, the symbol : *has the same meaning throughout*, and A, B, C, as well as (A : B), (B : C), (A : C), are propositions. But as this formula is a *formal certainty*, it holds good whether the statements A, B, C, have the same subject or not, so that it is more general than the syllogism. *Barbara* may also be expressed by

$$(A \prec B)\ (B \prec C) \prec (A \prec C),$$

but only on the condition that the symbol $\prec$ (unlike my symbol :) has *not* the same meaning throughout. For, though we may say that the *class* A is contained in the *class* B, the *class* B, in the *class* C, and the *class* A in the *class* C, we cannot logically speak of the *premisses* $(A \prec B)\ (B \prec C)$ as a *class* contained in the *conclusion* $A \prec C$. It is just the other way; if the word *contain* is to be used at all in this case, it is the conclusion that is contained in the premisses, and not the premisses in the conclusion.

If, in the last formula, the letters A, B, C denote propositions instead of classes, and we give $A \prec B$ its second meaning $A' + B$, the symbol $\prec$ will then (like my symbol :) have

the same meaning throughout ; but then the formula (unlike mine) will no longer represent *Barbara*. For $(A' + B)^\epsilon$, being synonymous with A : B, asserts that *every* P in the class A is also in the class B ; whereas A′ + B (or its equivalent $A \prec B$) only asserts that a certain P of the series P_1, P_2, P_3, etc., is either excluded from A or included in B ; it makes no assertion as to the other individuals of the series.

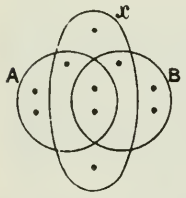
This comparison of the formulæ

$$(A : B)\,(B : C) : (A : C)$$
$$(A \prec B)\,(B \prec C) \prec (A \prec C),$$

which are erroneously supposed to be equivalent, is typical of many others. Another formula of mine that has led to misunderstandings is the formula (*Proceedings of the Mathematical Society*, Third Paper)

$$(A : x) + (B : x) : (AB : x).$$

Not that the validity of this formula has been called in question ; it is indeed almost self-evident ; but logicians have asserted that the symbol = might with advantage replace the symbol : before the conclusion AB : x, as (in their opinion) the converse implication is also true. Now, if my symbol A : B (like their symbol $A \prec B$) meant A′ + B, this converse implication *would* be true, and = might replace : before the conclusion AB : x. But this, as already explained, is *not* the signification of my symbol A : B, so that the substitution of = for : before the conclusion (or consequent) would destroy the validity of the formula. A geometrical illustration will make this clear. Out of the total ten points marked in the ellipse x and the two circles A, B of the accompanying figure, take a point P at random, and let A, B, x assert respectively (as propositions) that P will be in A, that P will be in B, that P will be in x. It is evident that the respective chances of the four propositions A, B, x, AB are $\frac{5}{10}$, $\frac{5}{10}$, $\frac{6}{10}$, $\frac{2}{10}$; so that they are all *variables*. The implication AB : x asserts that the point P cannot be in both the circles A and B without being also in the ellipse x, which is true. The implication A : x asserts that P cannot be in A without being in x, which is false ; and B : x asserts that P cannot be in B without being in x, which is false also. Thus, the alternative (A : x) + (B : x) is false while AB : x is true, so that in this case the substitution of the symbol = for : before AB : x in my formula would be wrong. But my formula is right in this case as in all others ; for



$$\iota + \iota : \tau = \iota^\tau + \iota^\tau : \tau^\tau = \eta + \eta : \epsilon = \eta : \epsilon$$
$$= (\eta^\tau \epsilon^\iota)^\eta = (\eta\eta)^\eta = \epsilon.$$

The same diagram will illustrate two other propositions which by most logicians are considered equivalent, but which, according to my interpretation of the conjunction *if*, are *not* equivalent. They are the complex conditional, *If* A *is true, then if* B *is true x is true*, and the simple conditional *If* A *and* B *are both true x is true*. Expressed in my notation, and with my interpretation of the conjunction *if*, these conditionals are respectively

$$A : (B : x) \text{ and } AB : x.$$

Giving to the propositions A, B, x, AB the same meanings as before (all having reference to the same subject, the random point P) it is evident that $B : x$, which asserts that the random point P cannot be in B without being also in x, *contradicts our data*, and is therefore *impossible*. The statement A, on the other hand, does *not* contradict our data, neither does its denial A′, for both in the given conditions are possible though uncertain. Hence, A is *a variable*, and $B : x$ being impossible, the complex conditional $A : (B : x)$ becomes $\theta : \eta$, which is synonymous with θ^{η} and therefore an *impossibility*. But the simple conditional $AB : x$, instead of being impossible, is, in the given conditions, a *certainty*, for it is clear that P cannot be in both A and B without being also in x. Hence, though $A : (B : x)$ always implies $AB : x$, the latter does not always imply the former, so that the two are not in all cases equivalent. In other words,

$$\{A : (B : x)\} : (AB : x)$$

is a formal certainty; but its converse

$$(AB : x) : \{A : (B : x)\}$$

is *not*.

Whether my interpretation of this troublesome little conjunction *if* is the most natural and the most in accordance with ordinary usage, I do not undertake to say; it certainly is the most convenient for the purposes of symbolic logic, and this alone is reason sufficient for its adoption. At the same time I may point out, as I did long ago (see MIND, Jan., 1880), that the usual *denial* of the conditional *If* A *is true* B *is true* is the categorical proposition A *may be true without* B *being true;* that is to say $(A : B)'$ is equivalent to $(AB')^{\eta}$, which asserts that AB′ is *possible*. From this equivalence necessarily follows the equivalence $A : B = (AB')^{\eta}$, which is my definition of the symbol A : B. The implication A : B expresses a *general law* and asserts that it has no exception. Its denial $(A : B)'$ asserts that the law is *not* in all cases valid; it asserts $(AB')^{\eta}$, that an *exception* AB′ is *possible*. The statement AB′ (the denial of A′ + B) asserts not merely the *possibility* of AB′, but *an instance of its actual occurrence.*

Just as A : B, or its synonym $(AB')^{\eta}$, implies A′ + B, so AB′, the denial of the latter, implies $(AB')^{\eta'}$, the denial of the former.

I did not enter upon the preceding discussion from any wish to provoke a controversy, but in order to remove misunderstandings. I find that several logicians are in error as to the precise meanings of my symbols and the relation in which my system stands to others that symbolically more or less resemble it. My main object has been to show that these resemblances of mere form hide important differences in matter, method, and limits of application. To effect this object without, at the same time, pointing out what, rightly or wrongly, I regard as serious defects in all the other symbolic systems of which I have any knowledge was impossible. But I have attacked no particular system; the faults that I have indicated are faults which they appear to have in common, and from which indeed my own earlier researches were not wholly free, though the central principle of these was sound and forms an important factor of the better and far more comprehensive system into which they have since developed. Modern symbolic logic, unlike the venerable logic of the schools, is a progressive science; it can lay claim to no finality or perfection. But, in the form which I have given it, it has now one great merit which it never possessed before; it has become a *practical* science; it can actually be applied as an instrument of research. As regards utility, logic used to be contrasted, much to its disadvantage, with mathematics; but now that the mathematician is obliged to hand over to the logician the disentanglement of some of his most difficult problems, he can no longer with justice or consistency look down upon the science of the latter and call it useless and inapplicable.

VI.—THE PROBLEM OF CONDUCT.

By J. H. Muirhead.

Mr. A. E. Taylor's book *The Problem of Conduct, a Study in the Phenomenology of Ethics* has been so long before the readers of Mind that it seems superfluous to offer a review of it in the ordinary sense. I propose therefore in what follows to do no more than touch upon the contents of its several chapters as a preliminary to some criticisms which an earlier perusal of it suggested to me and the reperusal at the request of the Editor has only served to confirm. This must be my excuse if I should here seem to fail to do justice to the substantial merits of a striking book—the courage and sincerity with which central problems are attacked and the brilliancy of the detailed expositions, amongst which that of the chapter on the "Goal of Ethics" and the last chapter carrying us "Beyond Good and Bad" are especially striking.

The Introduction defines the relation in which according to the writer Ethics stands to Metaphysics. Science in general is there defined as having for its aim the more and more adequate rendering of experience, in other words the freeing of our descriptions from the symbolic elements that so largely enter into scientific hypothesis. As contrasted with this, Metaphysics has both a critical and a constructive side. It is critical in that it tests the various theories and propositions which pass for true in every-day thinking and in science by the ideal standard of a pure or perfect experience; it is constructive in attempting to formulate the more general or formal conditions of experience. Should it then be claimed for any science as it is in Mr. Taylor's view by certain idealist writers for Ethics that it is dependent on and deducible from metaphysics, there are certain marks by which we may seek to test this claim, to wit: accurately defined limits and the absence of non-experiential elements which we cannot replace when desired by 'real' equivalents. Tested by this standard the claims of Ethics to rank as a deductive science founded on a metaphysical basis fall to the ground.

Though recommended to us by references to the authority of Avenarius and Cornelius the account here given of the logic of science will scarcely be recognised by those who accept what recent

epistemology has to say on the continuity between percept and concept, fact and hypothesis on the one hand, and between causal connexion and other forms of identity on the other. Is there, it may be asked, any "direct" experience of "identical recurring qualities or aspects within the general mass of otherwise undifferentiated organic consciousness" without admixture of concept or concept which is not in germ hypothesis and as such to be tested by the consistency it introduces into experience as a whole? Mr. Taylor in the latter part of his book seems to admit no other test than this and frequently alludes to it in express terms. The question which the reader will press is whether the test of self-consistency is identical with that of a "pure experience" upon which the emphasis is laid in the chapter before us. The too hasty identification of these divergent standards seems to me an obscurity from which the argument of the book never shakes itself wholly free.

The statement of the possible relations in which a Science may stand to Metaphysics raises a similar doubt. No science seems to be wholly deductive in the above sense; on the other hand none is wholly independent of Metaphysics. It is altogether a matter of degree depending on the relative concreteness of the subject matter. At the one extreme we have mathematics which may go its independent way, though this independence is at once challenged when the axioms of any particular system, *e.g.*, Euclidean geometry, are questioned. At the other extreme we have Logic as now generally interpreted. Intermediate between them stand such sciences as Psychology whether in the "falsified" form with which the laboratory makes us familiar or in the more concrete form of ordinary text-books. Ethics one should have supposed as a science of the concrete forces on the student from the outset the question of the value of our ideals in relation to experience as a whole—practical, theoretic and æsthetic, and thus stands in a peculiarly close relation to metaphysics. To the failure to keep this clearly before him is due it appears to me a certain hesitancy in the writer's appreciation of the moral sentiment which in one passage is described as a subordinate section of the facts of experience, in another as the contrivance for bringing the actions of the individual into harmony with the permanent interests of the species and of himself as its representative. That Green, who is here referred to as a warning, occupied himself in the *Prolegomena to Ethics* with metaphysical discussions, as does Mr. Taylor himself, is due to the fact that in his view, as in Mr. Taylor's, certain metaphysical assumptions as to the character of our moral experience have stood in the way of the correct appreciation of the facts. Had Green been writing now when these assumptions have been largely abandoned he would have been among the first to welcome the author's admirable programme as at least an essential part of a future ethic; although so long as views such as those of the preceding pages were current he would have probably felt that there is still room for greater clearness as to the nature of self-determination

and obedience to law and that restatements of the results of the work of his generation may still not be wholly out of place in an ethical treatise.

Chapter ii., "Metaphysical Ethic Considered" submits to detailed criticism Green's doctrines of an ideally Best and of the Eternal Self in forms which we venture to think the reader may find some difficulty in recognising. On the former Green is represented as holding that you must in outline at least know the best toward which humanity is gravitating before you can compare one type of life or one form of society with another, and say "This is better than that". "Such," we are told, "is the theory expressed or implicit which is responsible for the arrangement and method of the *Prolegomena*". On carefully rereading the passage in Green referred to (*Prolegomena*, p. 180), I cannot find any justification for this interpretation. It seems to me, on the contrary, an express repudiation of any attempt at such an outline. What Green throughout emphasises is something quite different, *viz.*, that human conduct is continually influenced by the ideal of a life in which elements that commonly fall apart, such as duty and happiness, self and other, truth and goodness are completely harmonised. We may differ as to the extent to which this harmony may be carried and as to the ultimate satisfactoriness and "reality" of ethical experience, but the importance of this ideal as a factor in moral consciousness is not likely to be denied, at least in a work like the present, the whole argument of which as I understand it rests upon this assumption.

I have a similar difficulty in accepting the interpretation of Green's doctrine of the Eternal Self as equivalent to the assertion of an unevolved and purely abstract subject of experience. Green's statements, it must be admitted, leave some room for doubt as to his view of the origin of human consciousness, but a careful study of the *Prolegomena* leaves, I think, no doubt that the "eternity" he speaks of is to be looked for not primarily in the absence of any traceable origin in time but in the character of human intelligence as a relating principle. As mental contents have their character determined by the whole in which they are elements so have actions: as in knowledge there is no resting-place short of the conception of a completely organised experience, so in conduct there is none short of the completely organised volition which is the counterpart of the ideal represented by civil society. To a writer holding this view it is not difficult to see how the character of this whole and not the descriptions of sociology must be the starting-point of moral as well as of political philosophy. Mr. Taylor speaks as though there was a difference in this respect between the *Prolegomena* and the *Lectures on Political Obligation*. But any difference of treatment is superficial. The theory of the Common Good, whatever its value, underlies both. Recent discussion has raised other issues and calls for a restatement of the

problem, but where discussion has hitherto shown itself fruitful it has taken the question up at the point where the idealism of the seventies left it. With all its ability Mr. Taylor's discussion leaves on the reader the impression of being to a large extent beside the point.

This impression is confirmed by the statement that Green "attributes to the inmost core of selfhood an absolutely unchanging character," an accusation which is sufficiently opposed to the whole tenor of recent idealism and which can only have found a place here through misunderstanding. It need hardly be said there is nothing in Green to support it. On the other hand many passages could easily be found (*e.g.*, *Works*, vol. ii., pp. 325-326) where such abstract identity is expressly repudiated.

The chapter on the "Roots of Ethics" begins the more constructive part of the Essay. Dispensing with the assumption of any implicit reference to a principle of organisation, it traces the moral sentiment in the spirit of Hume to its root in the feeling of approbation and disapprobation identified with satisfaction or disappointment arising from fulfilled or unfulfilled expectation. The discussion is a good one and may be said to bring the similar discussion in the *Inquiry* up to date. But it leaves a similar difficulty. Granted as an axiom of genetic psychology that there was a time when the distinction between ethical and other forms of disapprobation (*e.g.*, æsthetic) was unrecognised, whence could it spring except from some 'anoetic' difference in the content of these primitive undifferentiated judgments? Idealist writers have sought to find it in a germinal reference to the self and its achievements as 'will'. Mr. Taylor, so far as he touches on this "root" problem, seems to find it in the distinction of things and persons. This is a question of fact which we may be content to refer to the decision of the psychologist. I would suggest that while the latter distinction must doubtless be recognised before we can have moral judgment as we understand it we may have the distinction without moral judgment, and it would be difficult to prove that we may not have judgments which are essentially ethical without this distinction. The latter interpretation seems at any rate to be that of Mr. F. H. Bradley, who is quoted by the author as lending authority to his own view. It is true that in the note in *Appearance and Reality* to which reference is made Mr. Bradley speaks of approbation as the germ of moral consciousness, but he is careful to point out that not all approbation is moral but only such as contains a reference to the will or self, and to emphasise as the most important for ethics the factor which Mr. Taylor's account leaves in obscurity.[1]

[1] I have perhaps misunderstood Mr. Taylor's meaning in this passage. Yet it is difficult to see on what other footing he could have treated the question consistently with the general psychological theory as to the relation of volition to feeling and presentation which he seems to adopt.

The difficulty here raised has to be faced more explicitly when we came to the question of the source of the appearance of absolute worth which attaches to qualities and actions approved by morality. This Mr. Taylor finds, in the first instance, in the comparative permanence and unconditionality of the pleasure or satisfaction they tend to secure. Character has greater worth than wealth or beauty, because the wants it satisfies more constantly recur and are more universally felt. But the question remains as to the source of this permanence and unconditionality, and as to the wants that are thus universal. Granted that you can speak of certain pleasures or satisfactions as permanent and unconditional (or as Plato would say 'real'), what is the ground of their comparative reality? Plato's answer, in spite of ambiguities, was that those satisfactions are real and permanent, which are a sign that the will has found realisation as a system of organised activities. In referring us to the standard of "the steady progressive satisfaction of an organised system of persistent wants" and again to "the formula in which an individual finds the most coherent and adequate account of his own most deeply rooted preferences" Mr. Taylor leaves it doubtful whether, in spite of the phenomenology of his preface, he does not arrive at a like idealistic conclusion.

The next chapter on the "Types of Virtue" brings us to the main object of this part of the book, the empirical proof that "there is no self-consistent highest category under which all the various phenomena of the moral life can be satisfactorily grouped". "As in the various theories by which we attempt to describe physical phenomena we find ourselves driven to assert now the complete inertia, now the spontaneous mobility of material elements, now the complete homogeneousness of an all-pervading 'ether,' and again the presence in it of an infinite number of differential motions; now the instantaneous action of gravitation and again the dependence of all action upon a succession of impacts—so in our descriptive analysis of the phenomena of the moral life we are compelled to regard now self-assertion, self-satisfaction, self-development, and again the satisfactions of a wider whole as the two equally ultimate but quite irreconcilable poles between which our ethical practice is perpetually oscillating." The argument starts from the antithesis of the individual or intensive and the social or extensive Type of Virtue. Although as society progresses the paths of self-culture and of social duty seem to show a tendency to coincide, the coincidence can never be complete, for progress means the multiplication as well of the ways in which personal satisfaction may on occasion be

History has made us familiar with a presentational, admitted even by its most distinguished representatives to be a merely provisional because 'falsified' psychology; recent discussions have familiarised us with a volitional or concrete psychology resting on the recognition of will and feeling as fundamental factors; Mr. Taylor seems to adopt a compromise between them, retaining presentation and feeling as primary while treating volition as secondary and derivative.

sought at the expense of the community, as of the evils resulting from the gratification of merely personal desires. In chapter v. the same conclusion is brought home from the side of "Moral Ideals and Progress". As nothing is to be had for nothing, even the most successful effort after "self-realisation" must after all turn out to be a partial failure. On the other hand "social effort" necessarily involves "differential treatment"; the gain of one class the loss of another. Much, moreover, that goes by the name of progress is only apparent: human gain is animal loss; intellectual development, physical degeneration; improved conditions of life in one class, the exploitation of another. Even the moral gains of mercy, toleration, forgiveness mean a loss in courage, self-reliance, promptitude. Mr. Taylor does not assert on the ground of all this that moral progress is a delusion ("the voice of instructed mankind" declares against such a conclusion), but the signs of the times are not auspicious and we are left with the impression that this may be a prejudice.

So far as these conclusions are founded on empirical considerations we can hardly think them to have been satisfactory to Mr. Taylor himself. It would certainly be difficult to find support for them among expert writers on any of the subjects he mentions, industrial, ethical or educational. But the argument is fortified as we have seen by quite a different line of thought and in connexion with this raises a question of principle which is of fundamental philosophical importance.

Assuming it to be generally admitted among idealist writers (with whom as we have seen in spite of himself his argument allies the author) that morality falls short of the highest form of experience, as seems proved by the fact that its dialectic when followed as far as it can go leaves us at last face to face with contradiction, the question remains how far it carries us and how we are to conceive of its reality as affected by the fact that it cannot carry us to the end. Where Mr. Taylor departs from current idealism (unjustifiably we think) is first in finding contradiction and insolubility at the level of the individual and the social instead of at a point far beyond this popular antithesis; secondly (and partly as a consequence) in leaving us in obscurity as to the sense in which morality as commonly understood is real and valid at all.

From Plato downwards it has been the contention of idealism that beyond the antithesis of self and others a harmony is in principle attainable on the ethical level. In modern philosophy this point of view has been represented by Rousseau's General Will, Hegel's distinction between Moralität und Sittlichkeit, Green's Common Good and Mr. Bradley's Station and its Duties. The point at which morality shows itself to be relative and, judged by an absolute standard, unreal is not here but at the deeper level of the nature of the individual will itself. Mr. Taylor shows himself alive to the significance of this central conception of modern ethical theory in the later chapters, and it is the more surprising to find him labouring the lower contradiction in the

earlier. There seems the less justification for this as in doing so he separates himself in principle from Mr. Bradley whose lead he in general accepts. He recognises indeed that there is a difference between his own treatment and that of Mr. Bradley in his well-known chapter on "Goodness" in *Appearance and Reality*, but he sets it down as one of detail, apparently on the assumption that the doctrine of the latter work differs essentially from that of the *Ethical Studies*. There seems no evidence for such an assumption. It is true that in the earlier book the contradiction which leads beyond morality is that implied in an unrealised ideal in general ("If real how realise? if realise then not real"), in the later it is sought for in the ideal itself. But the elements that fall apart in the ideal are not the individual and society but self-assertion and self-sacrifice, the distinction between them being defined as one not of the contents which are used but of the different uses that are made of them. This is not the place for criticism of Mr. Bradley's doctrine. I wish merely to point out that it is different in principle from that in the text, where the contradiction is taken I think to be one of content.

Connected with this is the further difference that while in the writer's argument the emphasis falls on the irreconcilability of the elements Mr. Bradley never loses sight of the other side of the dialectic, *viz.*, that in principle and actually the features that appear to be in contradiction must in the end coincide. True the 'end' is also the end of Goodness as such. But this only means that morality depends upon the belief in a unity which, if realised, would carry it into a region where without ceasing to be real it would cease to be 'morality'. Mr. Taylor would not, I think, deny this: the difficulty is to see how it is connected with the argument in the earlier chapters which aims at demonstrating a radical and irreconcilable contradiction.

The criticism on the Pleasure theory that follows in the chapter on "Pleasure, Duty and the Good," while in agreement on the whole with current idealism, parts company from it on the question of the possibility of a sum of pleasures. The disagreement as in some other points seems more verbal than real. Freed from the obscurity already noticed as to the sense in which 'permanence' of wants is to be taken and from the reference to finality of satisfaction which hardly seems compatible with his own argument Mr. Taylor's statement might have been taken from Green himself: "It is not a mere succession of satisfactions but a succession of satisfactions in which a permanent want finds an ever-widening realisation along the same lines that we really mean to make us contented. A mere series of satisfactions bound together by no unity of aim and marked by no progress would hardly be finally satisfactory to any one."

A more serious matter is the treatment that the conception of Duty receives in the remainder of the chapter. This of course is a

test question in any ethical theory and it is disappointing to find it discussed in what strikes one as the most cursory and unsatisfactory section of the book. The drift of the argument may be recalled from the statement that "Ultimately I ought to do this means the leaving of this undone would conflict with my deliberate judgment as to the type of life of which I approve and which I expect of myself". If all ideals are equally self-contradictory as the previous chapters have proved and none really more comprehensive as regards its content than another we can easily understand how a sense of obligation could only grow up in connexion with the formal attitude of the will towards any one of them. But is not some further explanation required on the fundamental point of the reason why self-reproach should attach to the attitude of inconsistency rather than to that of consistency with oneself? In such a welter of contradictions where the cultivation of a robust conscience seems the supreme obligation may not *pecca fortiter* be equally applicable where the sin is inconsistency as where it is anything else? The answer of idealism to such a doubt is I suppose that, as in the theoretic so in the practical world, progress and the 'permanent satisfaction' which the sense of it brings depend upon recognition of the inward pressure of an ideal of systematic self-expression as the deepest thing in life. Mr. Taylor as we have seen does not leave us without a hint of such a system, but he has been at no pains to develop it and thus leaves us without guidance at the critical point of the argument.

The concluding chapters on the "Goal of Ethics" and "Beyond Good and Bad" exhibit religion as the necessary refuge from the unsatisfactoriness of the moral life. As however they deduce this consequence not from the contradiction between the individual and social ideal but from the unsatisfactoriness of human life in general, considered as the realisation of a self defined in any terms that do not take account of its relations to an Absolute or all-inclusive experience,—they do not call for notice here. While adding to the reputation of the writer they do not add to the main ethical contention which it has been the object of these notes to criticise.

To summarise this criticism. The argument of the book seems to have had its origin in a certain impatience with what appears to the author an ill-timed self-complacency in the idealist philosophy of the time. Since the days of its establishment in English ethics by the *Prolegomena* and the *Ethical Studies* many things have happened. Progress has been rapid both in psychology and, thanks mainly to Mr. Bradley himself, in metaphysics. In view of these advances a revision of the current doctrine of self-realisation seems to Mr. Taylor to be required. If this were his whole contention there would be little to object to in his criticism. It may very well be true that the phrase 'self-realisation' is a little threadbare, and that a restatement of the whole position is called

for. But this is not that to which Mr. Taylor's argument directs us. It is a double-barrelled attack on the whole idealist position of an underlying unity of the social and individual will. On the one hand this unity is attacked from the point of view of empiricism: there is no trace of it in the form of feeling or judgment which lies at the root of ethics; on the other hand it is attacked from the point of view of the absolute philosophy as essentially incapable of realisation. I have not considered it necessary to prove that these two points of view are not at any rate *prima facie* the same or reconcilable with one another. I have tried to show that the first indicates a certain failure on the part of the author to appropriate the results of the earlier idealist movement of our own time, while the mode of argument based upon the second equally fails to interpret the later. The aim of the earlier movement was not to pledge idealist ethics to a timeless self, but merely to the reality of moral distinctions. Later developments instead of invalidating this reality start from it as a datum, going on to investigate at what point it must itself become transformed into a form of consciousness which just because it is morality is also something more.

VII.—DISCUSSION.

BRIEF CRITIQUE OF "PSYCHO-PHYSICAL PARALLELISM".

A DECADE or two ago, the hypothesis commonly known as "psycho-physical parallelism" seemed to have made a permanent capture of the major part of the serious students of man's mental life. More recently some of the recognised authorities in psychology have dissented from its tenets as representing anything like a complete and final solution of the problem of the relations of body and mind. This dissent has not been wholly without influence upon the majority. Thus the attitude of mind assumed toward the problem may be said at the present time to divide psychologists into the following three classes: (1) those who still accept the hypothesis of psycho-physical parallelism but, for various reasons, do not choose to re-examine and restate this hypothesis; (2) those who are indifferent to, or weary of, all discussion of this and similar problems; and (3) those who regard the entire subject as so profound a mystery that the problem it proposes is essentially and eternally insolvable. In opposition to any of my colleagues who may belong to either of these classes I wish to maintain briefly three counter propositions: (1) The hypothesis of psycho-physical parallelism sorely needs re-examination by its advocates, and it cannot be stated in any form which will satisfy the demands for explanation of the phenomena. (2) Indifference to the problem of the relations of man's body and mind is, both from the theoretical and the practical point of view, inconsistent with the most serious work in psychology. (3) This problem is no more essentially mysterious and insolvable than are all the profounder problems of psychology; but it is a problem for philosophy to consider, while the scientific psychologist adopts a quite different working hypothesis from that of psycho-physical parallelism. These conclusions I should wish to establish, did time permit, by a detailed discussion of the following points.

1. All the data for any theory as to the relations of body and mind originate within the unity of the so-called "stream of consciousness". These data consist of occurrences in, or portions of, one experience; and this experience may be called the conscious life of the mind. In this life, and in accordance with its constitution and

with the laws of its development, perceptions and apperceptions of things—the visible or felt parts of the body included—and states of self-consciousness are alike experienced as connected together. Nor is this connexion simply temporal, a sequence of time merely. It is true that the different items of the one experience do, in fact and as actually experienced, follow each other in time. They exist in the "stream of consciousness" as a sequence. This is true. But it is also just as true that they appear in consciousness as connected in what is irresistibly believed to be a *dynamical* way. Certain feelings of activity or passivity, certain conations and so-called deeds of will, are essential elements of some of these experiences. Nay; it may the rather be claimed that such feelings and conations are inseparable from every state of consciousness. It is these, chiefly if not wholly, which give to the reality of our experience the appearance—and, as I believe, the experienced fact—of a dynamical connexion existing between certain items of this experience. I am not now dealing with the explanation of this apparent dynamical connexion; nor am I attempting the detailed introspective or experimental analysis of the experience of it. I am only stating the fact that the different items of experience appear connected, within the unity of the conscious life, in a dynamical way.

2. Just as patent as the fact of this temporal and dynamical connexion of the different items in the one so-called "stream of consciousness" is the fact of a certain *diremption* of the experienced phenomena by the activity of discriminating consciousness. The phenomena actually become divided; and the act of division is both a condition and also a product of the growth of intellect. Two great classes of the phenomena come to be distinguished. These are the phenomena assigned to things as their subject, and the phenomena assigned to the Self. And this distinction, so far as it rests upon data of experience, is not confused, but the rather confirmed by the fact that certain of the psychoses come to occupy a rather unique position in the sum-total of experience. Their very nature is such that for certain purposes of classification the discriminating consciousness of the individual may set them in a sort of opposition to the Ego and speak of them as belonging rather to the body; while for other purposes it may feel inclined and entitled to regard them as part of the same Self. Thus, in some sort and to some extent, all adult intellectual development regards the body as not identical with the Ego but, the rather, as the body of the self.

There is, of course, no time in this connexion to estimate the meaning and the value of this diremption of the one experience and the resulting classification of the phenomena; or to defend it against the attempts made to minimise its importance in view of recent investigations in the fields of comparative, genetic, or abnormal psychology. The distinction, however it arose, exists as the one unchanging test of soundness of intellect. It is essential to in-

tellectual development; it is perennial, irrevocable, and fundamental in the evolution of the race.

3. These two classes of phenomena, or experiences, those of which we designate the *Ego* as the subject and those which we feel obliged, or at liberty, to consider as phenomena of the physical organism, are experienced in such connexions in time, and with such characteristic colouring from feeling and conation, more or less inhibited, that they are inevitably regarded as standing to each other in actual dynamical relations. All our experience of the two classes of states tends to confirm this impression—tends, if you please, to "rub it in hard," to embed it in the very marrow of the frame-work of experience. Observed changes, produced by other things upon the thing-like body, are followed by changes in self-conscious states; and changes in the latter are followed by changes in the former; while the very nature of the changes, as well as of the transitional feelings accompanying the changes, establishes in experience what we are forced to consider as a real dynamical connexion of the two. Nor is this the whole of the mind's irresistible conclusion. For man, whatever may be true of the lower animals or of the ancestors of man before they were human, is through and through metaphysical. If I may sum up in this phrase his whole mental procedure with regard to reality,—call it the having of "innate ideas," or inference instinctive or logical, or belief, or what you will,—man possesses, and cannot help constantly using, an "ontological consciousness". It is *reality* that he imagines, infers, knows, believes in, as the sufficient and only account of his experience. He is, therefore, bound to be a metaphysician, whatever psychology or any other science may hold to the contrary, with regard to the felt dynamical relations of these two classes of phenomena united in the one "stream of consciousness". Therefore, he imagines, infers, believes in, and knows, two real beings, his body and his mind, to be dynamically related in the one experience.

4. On drawing the conclusions of this "ontological consciousness" out into popular language they amount to this: the being which is known as the subject of conscious states and the being which is known as the body belonging to that subject are known to exist in actual, reciprocal, causal relations. The full significance to experience of the problem which is thus put before psychology and philosophy can be stated in no other way than just this. If we have any experience which entitles us to use such words as "reality," "connexions in reality," "cause," "causal connexion," "causal influence," etc., then our particular experience of the character of these two classes of phenomena, and of the relations which arise and maintain themselves between the two in the one stream of consciousness, entitles us to use these words when speaking of body and mind.

5. For, moreover, the very conceptions of "cause" and "causal relations" or "causal influence" arise in this self-same experience

of what takes place when states of consciousness that are predominatingly states of feeling and conation, and states that are perceptions of conditions or changes of the bodily organism, follow each other in reciprocal dependence. Take out of the stream of consciousness, out of the experienced life of the soul, the red-blood of felt-strivings, of successful or inhibited willing, of pain and pleasure following upon observed changes in superficial or more interior parts of the body, and the empirical data for all our metaphysical conceptions would be gone. There would no longer be any demand upon psychology to interpret the "stream of consciousness," with its unity in duality, in terms of ontological consciousness. When, then, either physicists or psychologists, or both acting in conjunction, deny the validity of the ontological interpretation of the psychological facts, they are passing quite beyond the limits of the working hypothesis which is alone legitimate for both kinds of work. They should both be called sharply to account for the transgression at the final court of appeal, which is philosophy. And I have little hesitation in affirming that, so far as my acquaintance with the subject goes, not one of the modern advocates of the hypothesis of psycho-physical parallelism has ever given evidence of having bestowed the needed criticism upon the categories which the statement of the hypothesis necessarily involves. What is it to be, in reality, a cause? What do we mean by actual causal relations or connexions? What is it really to be, as all things and minds are; and what to be related as every individual man's body certainly seems to be reciprocally related to that same individual's mind?

6. But to return to the empirical point of view. From this point of view, and judged impartially by the evidence which appears from this point of view, the hypothesis of psycho-physical parallelism is most unscientific. It is, indeed, either unintelligible, or inadequate, or plainly false. With regard to some of the indefinitely numerous and complex relations which do actually reveal themselves to science as maintained between the phenomena ascribed to the *Ego* as their subject and the phenomena ascribed to the physical organism as their subject, it has all of these defects as a hypothesis. How, briefly stated, shall we clearly understand the figure of speech embodied in the word "parallelism"? Plainly not in the geometrical or spatial meaning. Nor can it be strictly interpreted in terms of a temporal or time series. So far as experience shows, what we have is interdependent sequences, with impressive dynamic accompaniments, between these two classes of phenomena. But such an experience is the very one on which we build up our theories of reciprocal causation. Moreover, the time-series of psychoses differs from the time-series of neuroses—so far as we know anything about the latter—in several important ways. And there are few of the reigning fallacies of psychology more mistaken than that which has embodied itself in the comparison of the life of the mind in time to a continuously flowing "stream". Still

further, there are important and essential factors and activities of psychic life and psychic development which cannot be related to changes in the bodily element in any such manner as to justify the word "parallelism"; and this, for the very good reason that in respect of these factors and activities psychic and physical phenomena are decidedly *not* parallel. And no legitimate interpretation of the figure of speech involved in the uses of this word can justify the hypothesis. I repeat, therefore, that the very terms in which the hypothesis states itself are, when the attempt is made to render their figurative meaning into conceptions of scientific value and scientific accuracy, either unintelligible, or inadequate, or plainly false.

Let me call attention again at this point to the data for all our theorising. These data are facts of experience which place the two classes of phenomena in felt dynamical relations within the unity of the mind's life. The explanation which discriminating, "ontological consciousness" gives of this experience refers the two classes of phenomena, thus related, to two real beings as their subjects, or centres of attachment, as it were. It is essentially the same kind of an explanation which the intellect gives of all such experienced relations. Indeed, the very concepts which we employ in all explanations arise out of the same experience.

7. *A fortiori* does the hypothesis psycho-physical parallelism, when, as always of necessity happens, it becomes metaphysical, either fail fully to apprehend, or else quite completely contradict, the proper meanings and applications of the categories which it employs. The truth is that it, too often, sets out with the claim to establish itself in a purely scientific way upon an empirical basis; and beginning to feel weakness here, because so many of the facts are difficult of arrangement under such an hypothesis, it makes the leap into what it has perhaps warned all psychologists against as being the dark night of metaphysics, the "death kingdom of abstractions"—in this case, not well abstracted from well-ascertained empirical data.

8. Psycho-physical science—in the broadest meaning of this term—or the classified and organised knowledge of the empirical data—so long as it remains faithful to its inherent limitations, as well as stoutly defensive of its own rights within its legitimate domain, does not essentially alter the popular conceptions. These conceptions regard the body and the mind as belonging to different classes of beings and yet as reciprocally influencing each other in a unique way. They not only authorise, but they even demand (and the demand is itself based upon the deepest experiences of the soul) the theory of dynamic relations established between the two, which are worthy of being called "causal," and which may be investigated as determined and determining; while at the same time doing honour to the claims of each to a place in the world of reality as known by a trustworthy experience. What science discovers is not "parallelism," but an infinitely subtile and com-

plex network of relations. Our science builds itself up and gains the legitimate respect of all the other students of science according as it is able to amplify and make more accurate man's knowledge of these relations. It actually finds the relations to be far more deep-seated, as it were, and indefinitely more intricate than had formerly been supposed. And although psycho-physical science, like all the other most nearly allied sciences, has been discovering facts much more rapidly than it has been able to establish legitimate generalisations, or formulæ, or laws, upon the basis of these facts, this science is hopeful as to future discoveries. But if the sum-total of its announcement of results—no matter with what flourish of trumpets or expanding use of scientific phraseology the announcement may be made—comes only to this: Every psychical event, no matter what, is paralleled by some physical or nervous event, we know not what, then, for my part, I shall blame no worker in any other field of science for neglecting and despising psychology. What occurrences in consciousness are dynamically, or otherwise, related with precisely what occurrences in the bodily organism? What are the formulæ that express these relations? What are those most general principles of their behaviour and their relations in that reciprocal dependence which characterises the development of the body and the development of the mind? and, How may we, in accordance with the facts, conceive of the essential nature of each?—these, and such as these, are the problems before psycho-physical science. And the scientific barrenness, coupled with its mythological vagueness, of the hypothesis of psycho-physical parallelism has been, in my judgment, a distinct detriment to the cause of a progressive psychology. It has done what all statements that employ ill-chosen figures of speech always do; it has obscured the real state of the case, and the real issues at stake.

9. But, finally, our philosophical nature is no more satisfied to leave the problem of the relations of man's body and man's mind in the condition in which both the popular conceptions and the working theory of science leave it, than to leave any of the problems which appear before the mind in so unsettled a condition. The philosophy of Mind, like all philosophy, seeks to establish the higher and the profounder unities. It finds the life of the soul and the life of the body united in experience in a manner which, while it is perhaps no more ultimately mysterious or even more suggestive than the temporary union of oxygen and hydrogen (whose formula we know), is of infinitely more ethical and æsthetical interest. This union is also, as I have already said, infinitely complex and subtile; and the more we examine it, the more do the complexities and subtleties of it come to view. Ontological consciousness seeks then to be satisfied. It requires some tenable conception of a real bond, or underlying unity, for body and mind. And as philosophy reflects upon the data of facts and laws which psycho-physical science hands over to it, philosophy sees ever more clearly that this bond

must be found in the Being of the Cosmos itself. For in this Being man, both body and mind, has his being; and in the nature of the Cosmos must somehow be found the more ultimate explanation of the infinitely varied, complicated and subtile interrelations of the two. This necessity is especially placed upon the problem which psycho-physical science hands over to philosophy. For in the microcosmus the Cosmos is revealed as nowhere else. But how we shall conceive of this Cosmos so as to satisfy the conditions, as best we may, not only of this psycho-physical problem but of all our more ultimate scientific problems, general philosophy and the philosophy of religion strive to show.

GEORGE TRUMBULL LADD.

VIII.—CRITICAL NOTICES.

The Ethics of T. H. Green, Herbert Spencer, and J. Martineau. By Henry Sidgwick. Pp. xli., 374. Macmillan, 1902.

It is pointed out in the Preface that the works which these Lectures discuss appeared subsequently to the first publication of the *Methods of Ethics*. This volume therefore forms a very important supplement to that work. To Green it gives 130 pages, to Herbert Spencer 182, and to Martineau 62. The criticisms, though clearly put as we should expect from Sidgwick, are very brief, and correspondingly numerous. It would be an excellent exercise for any student to go through them point by point, but the result of such a process could not be compressed into a review. I will take what seem important questions.

In the lectures on Green, after expressing a qualified agreement with Green's dismissal of "naturalistic ethical sanctions" as founded on illusion, the author passes to Green's Metaphysic as contained in the *Prolegomena*, Book I. (p. 9). He briefly indicates a difficulty in the theory itself (whether the unifying principle need necessarily be self-conscious) and in its bearing on the unity of the individual's consciousness. As to the former point, I should admit that Green's expression is doubtful if taken strictly as against consciousness, but not if taken widely as against the unconscious. I do not know which of these the author meant to assert. As to the individual consciousness, the explanation in the *Prolegomena* (sect. 68) appears to me to be sound. But what really engages the author's attention is the question how Green is to get any Ethics out of his Metaphysics. He criticises the expressions which suggest that Green's laborious argument has led us to no knowledge of the infinite spirit, as if they implied that Green relied on a belief which goes beyond his reasoned conclusion. I think there is possibly a real fluctuation in Green's attitude as to the degree in which the general conception warranted by Metaphysic amounted to a "knowledge" of the infinite spirit. (See *Memoir*, cxlii. I may be allowed to remark at this point that Sidgwick seems to me to treat the *Prolegomena* rather as a reviewer than as an investigator. I mean that he hardly ever refers to Green's other works, and never to Nettleship's *Memoir*, which is founded on a study of the whole works, in order to illustrate or

explain any difficulty in the *Prolegomena*. Many of his criticisms would fall away simply in face of citations from the *Memoir*.) But there is no doubt, I think, that for Green the conceptions to which he attached his Ethical ideas were warranted Metaphysical conceptions. I would point out first, as against the criticism that Green's Metaphysics give us at best a progress in knowledge, that Book I., "The Metaphysics of Knowledge," is not to be taken as the whole Metaphysic from which the Ethic is deduced. It is merely the first elucidation or approximation, to which a parallel, and not merely derivative, metaphysic of morals and action is afterwards added.[1]

But then, in relation to the latter, as to the former, no doubt the criticism appears to have point. What can you get out of a "self-distinguishing consciousness" more than that it should do what *ex hyp.* it is always doing, *viz.*, distinguish itself? And if you add that its nature is to be eternal, what difference does that make to its content?

I have elsewhere[2] set out my views on this and kindred points at greater length than would be proper in a review. But I will here take this criticism and that on Green's Freedom of the Will together, and try to put briefly what seems to me the cardinal point. That on the Freedom of the Will (as treated in the *Prolegomena*) is (p. 20) that the universal or common element of the Self, as the same for all individuals, cannot be the determinant of choice, and this must therefore be found in the particular element —"the particularity of the chain of natural causation" (p. 17). And this amounts to Determinism. The objection is a very natural and a very troublesome one; one which all of us must have felt. The cardinal point, which it shares with the allegation that there is a gap between Green's Metaphysic and his Ethics, is, I suggest, the conviction that mere thought cannot modify content. What in particular can thought do? we ask. It seems a sort of contentless activity. Things come into it and combine and we are aware of them. But thought, it seems, cannot contribute any particular element to the combination; cannot make sweet into sour, or blue into red, or pain into pleasure. We are, then, what has come together in us, and nothing more, and our particular choices are a name for the results of a particular combination.

Such reasoning implies the separation of the universal and particular element, and consequently the inertness of the former; and it is to this that Green objects in principle. For him, as I understand him (*e.g.*, *Prolegomena*, 89), self-consciousness has a definite way of operating, which involves an effort at a type of perfection definable in its general character from the nature of

[1] For the distinction see sect. 85.

[2] In a paper on "Recent Criticism of Green's Ethics" in *Aristotelian Proceedings*, 1901-2, and in a discussion of Mr. McTaggart's recent work, shortly I hope to appear in MIND.

self-consciousness (*Memoir*, xcii.-iii.). This way of operating, when exercised through human limitations, is the individual way of an individual human spirit; for though in one sense logic is everywhere the same, yet in another sense every set of ideas has a logic of its own, here giving rise to the structure of character by the same kind of effort towards a whole by which in cognition the logical spirit gives rise to science. Thus it is that persons are different, and these differences are in one sense obviously and really rooted in natural events. But the differences are not due to natural events, because the contribution of such events to individual human life lies in the transformation which they have undergone, through the new bearings upon one another which the inherent effort towards a "whole" is always introducing. And it is for this reason, *viz.*, that self-consciousness involves a definite though self-adapting Logic, and a definite road to perfection, that the whole of morality, and indeed the whole of life and experience, can be wrapped up in what, if we could separate it into elements, seems as if it would be a bare series of natural events on the one hand, and a meagrely defined Self-Consciousness on the other. I may refer by anticipation to the middle paragraph on page 47, to the effect that the self-conscious entity is to all appearance fully realised at present. This puts in a nutshell the whole question of principle which separates Sidgwick's mind from Green's. To Green the spirit's own nature, in view of its particular present imperfections, prescribes the road which it has to travel towards realisation; and by its laws, just as we know how to make definite new science out of old *plus* experience, so we know how to make definite new morality out of old *plus* experience.

The opinion that Green's exclusion of indeterminism—he would refuse to call it Determinism—destroys imputability (p. 20) seems to me well met by the old answer, which Green states very clearly in sections 110 and 112. It is breaking the connexion between act and character, not maintaining it, that cuts the nerve of responsibility.

The charge that Green ignores the wilful choice of wrong (p. 25) has, I think, a strong appearance of truth. Yet it is introduced by what I believe to be a misinterpretation, which places Green's view in a needlessly unfavourable light. When Green condemns the expression that Desire conflicts with Reason, Sidgwick takes this to mean (p. 23) that Green ignores the obvious truth that one may act contrary to one's rational judgment. For this is Sidgwick's own meaning in saying that "Desire conflicts with Reason," and he does not think (p. 29) that any one has seriously used the expression to imply a separation and opposition of the two. But I take it that Green is speaking in a sense akin to that of Hume (*Treatise*, Bk. II., III., iii.) "Of the Influencing Motives of the Will". "Nothing is more usual in Philosophy, and even in common life, than to talk of the combat of Passion and Reason, to give the preference to Reason, etc. On this mode

of thinking the greatest part of moral philosophy, ancient and modern, seems to be founded." It was necessary for Green to disclaim this traditional opposition between Desire and Reason, as opposing "motives" in the direction of the Will, before he could establish his own theory of Will and Desire, according to which the conflict in a vicious choice is between Reason and better Reason (sect. 179). His criticism of the expression "conflict between desire and reason" does not, therefore, in itself mean that he ignores the wilful choice of wrong. He repeatedly (137, 179) adopts the phrase that a man knows the better and prefers the worse. The sole point in his view which raises a difficulty is that which attributes man's conduct whether virtuous or vicious to an idea of his personal good (*e.g.*, sect. 115). Can such a term be truly applied to the choice of wrong known to be wrong (Sidgwick, p. 25)? It has to be remembered in judging of this point that the wrong, though known to be wrong when chosen, can hardly be chosen for its wrongness, but must be chosen for the positive element within it on which self-assertion can be founded. Therefore there is a clear meaning in saying that in a vicious choice man takes for his personal good, for that in which alone at the moment he can assert himself, something which he knows to be wrong, that is to say, to be opposed to a fuller self-assertion which his momentary self can conceive, but cannot attend to so as to make it effective. He takes as his good what he knows to be bad. The expression may be too paradoxical; the important point is, i., to remember that it is the partial good in the vicious act which alone he can desire, and, ii., if a weaker expression, *e.g.*, "what is personally chosen," is adopted, not to let it obscure the fact of the realisation of the man's nature positively in his acts, in vicious as in virtuous conduct. I am greatly struck in re-reading the *Prolegomena* with the distinct account of Will as "the action of an idea—impelling to its realisation" (sect. 152). I do not think that Sidgwick does justice to this point on page 28. On page 26 something has gone wrong, possibly in the revision. The words quoted from the *Prolegomena*, page 147, as describing the aim of Green's argument, are used by Green to describe what he is arguing against, *viz.*, the conception of a will which is not desire. On the other hand Sidgwick seems right in urging such an idea as that of posthumous fame against Green's requirement that the idea which precedes volition must be that of oneself doing or enjoying (sect. 31): only perhaps it might be rejoined that you can hardly will posthumous fame immediately, and in as far as you will any act as a means towards it, it might become possible to apply Green's definition. The real solution, no doubt, lies in the continuity of the self and the world.

Lectures III., IV., and V. deal with Green's conception of self-satisfaction, the True Good and Self-sacrifice. The author finds the idea of self-satisfaction indistinct, in regard to such questions as: Is it always present in the fulfilment of Desire and how? Is

the failure to attain it intellectual or not? How can it conciliate Egoism and Universalism, or be non-competitive? How can it be abiding, and how can it give guidance? I should have thought that all these questions would answer themselves from the point of view which I have tried to take above, in dealing with the alleged gap between Green's Metaphysic and his Ethics. Let us take (p. 37) "Green here seems to say that satisfaction of desire is extinction of desire, but self-satisfaction certainly does not mean self-extinction". The continuation of the passage which Sidgwick has just cited from the *Prolegomena* runs, "In that sense the desire is at once a consciousness of opposition between a man's self and the real world, and an effort to overcome it by giving reality. . . ." Is it not plain that what is meant is an extinction of the consciousness of opposition in the point in question, and a satisfaction in the reality which the effort has brought into existence? But (p. 40) a course of action is described by Green as a man's Good, although attainment is supposed absent. Therefore it would seem, the author urges, that the good may mean merely what is preferred as an end, and be independent of the satisfaction of accomplishment. If so, there could be no illusion in the choice of objects as good. But all this, and more of the same kind in Lecture IV., seems to depend on the separation of Will and Intelligence which it is Green's object to deny. If the human spirit possesses, as Green contends, a definite structure and logic in dealing with the objects of life, then it is satisfied in as far as what conflicts with this nature of its own is harmonised and overcome. And it is plain that a realisation of this kind is a matter of degree, and begins as soon as an idea, in harmony with the law of the self, begins to move towards realisation within it. But this cannot mean that mere volition is good without attainment of real actual good. Will and effect are two inseparable sides of every action, and you cannot judge part of it by one standard and the rest by another (*Memoir*, cxlvi.). A Will which does no good at all surely cannot be a good will. At best, it would equal the predominance of an idea which had no meaning in the real world and so no trace of power to harmonise. It would be insanity. A will which, for example, harmonises the more refractory parts of a man's own disposition, though apparently ineffectual outside him, is the realisation of a certain end, and I think Green would call it (sect. 376) "a constituent" part of the good, in its own nature.

The gulf between the two writers is perhaps most apparent where Sidgwick complains that he finds "unqualified egoism" on one page, and "unmediated universalism" on another, and where he raises objections to the alleged non-competitive character of the true good. To Green, I suppose, the *onus probandi* (Psychological Hedonism being out of the field) would have seemed to lie with those who raise these difficulties. Man has a certain nature, which, so far as we can see, works, though under hindrances,

towards a certain kind of completeness, which the self aspires to. There is no *prima facie* reason to limit the self in the completion of which we are interested, and to which the objects of our will correspond, except accidentally by the limits of our knowledge. On the contrary, every contradiction in another self is in principle, so far as we can see, a contradiction in our own[1]. It is a fact which conflicts with our nature, and the idea of which therefore moves us to its extinction.

It is true that we are very limited creatures and cannot have everything,[2] and here is the force of Sidgwick's reminder that Green's account of Justice, Beneficence and Self-Sacrifice seems incompatible with his doctrine of the non-competitive good (Lect. V.). But is there a real difficulty here? Is it not quite plain that the better one of us is in mind and heart, the better, so far, all others are likely to be? Surely it is only the material means which are here competitive,[3] and not the good itself. Art and Science are no exception to this rule. The result is, no doubt, that real good as Green says, has to be sacrificed as an incident of the higher life; in fact, we might add, as an incident of finite life at all. But the choice seems to have no natural relation to the antithesis of self and others; all goods are good by the correspondence of their nature to the tendency of our spirit, and we take what under all the conditions we can take most fully.[4]

In chapter vi., which deals with Green's account of the Greek ideal of Virtue, there is much that is very well worth considering for those who have been fascinated by Green's unusually attractive statement. The omission of the Stoic ideal, and consequently of the nearest Greek approach to the brotherhood of man, is, as Sidgwick says, a defect. Yet was Stoicism characteristically Greek in the same degree as the thought of Plato and Aristotle? For the rest, I think it is true that Green has modernised. The purpose of his comparison led him to do so. But I am not convinced that he has "modernised naïvely". On the contrary, I have been very greatly surprised at Sidgwick's general view of Socrates, Plato and Aristotle, which, especially as regards the latter, pursues the line of Common Sense—a very necessary and instructive line in due subordination—almost, if I am right, in sheer defiance of modern scholarship. Any one who will compare Grant, Stewart or Burnet, on the Ethics, step by step with the views of this chapter, will find I think a good deal to astonish him. It does appear to me, though I should wish that some thoroughly competent scholar would look into the matter, that Green has modernised as a true scholar and philosophical student, who has

[1] Cf. paper in *Aristotelian Proceedings*.

[2] Mr. Taylor puts this excellently in *The Problem of Conduct*.

[3] The common tendency is greatly to over-rate the competitive character even of these.

[4] *Aristotelian Proceedings*.

tried to grasp the bearings of his author's system; while Sidgwick has modernised as a wider reader with immense literal knowledge, but having never really considered how Aristotle's philosophy hangs together and how its parts modify each other's significance. In Aristotle this is particularly dangerous. It is quite certain, that one may read long sections (see p. 93) with careful attention, and yet wholly miss their point if ignorant of the philosophical framework. I take one example, using, as Sidgwick sometimes does in Green's case, the remarkably excellent analytical summary prefixed by the editor. "Aristotle . . . does not suggest that Wisdom, Courage, Temperance and Justice were valued by Common Sense as conducive to the unfolding of the capacities of the rational man in full harmonious activity." We are speaking, I presume, of Aristotle's own theory (p. 82 top, p. 89) and the allusion to Common Sense is merely an *obiter dictum*, referring to its supposed source. If we compare this statement with any good editor's explanation of the doctrine of the mean, we shall be at a loss to understand Sidgwick's position.

Even on the question of Hume's Hedonism, and Hutcheson's position, where Sidgwick should be *facile princeps*, I find grave cause to doubt the soundness of his view, and the justifiability of his tone in referring to Green. He characterises Green's statement that an act of a man's own necessarily proceeded according to Hume from some desire for pleasure (Sidgwick, p. 104) as "a simple blunder due to ignorance". It does not quite seem to me to have been so. I read it as an elliptical statement by an expert, of a contention which he had elsewhere maintained in a careful argument with full discussion of opposing evidence. It would have been better if Green had referred, perhaps in a footnote, to the opposing evidence which he had elsewhere discussed. Probably if he had revised his book he would have done so. I mention the point in part because it leads up to a suggestion which the lectures have forced upon me. Sidgwick judges Green by the distinction between Psychological and Ethical Hedonism. But I believe this is a misleading distinction, certainly as to Hume and Hutcheson, and perhaps as to Sidgwick himself. There are, it seems to me, different degrees of psychological Hedonism, but all Hedonism, except Mr. McTaggart's (and as to this I am not sure), is psychological. Sidgwick much underrates, so far as I can see, the tendency of the pleasure-motive to be taken as the sole motive for a self-conscious and reflective moral agent, certainly in Hume and even in Hutcheson. The very Appendix on Self-Love, which he charges Green with having forgotten, is shown by Green in his full discussion to point that way. And Hutcheson's elaborate Hedonistic calculus, together with other expressions in his writings, justify a doubt how thoroughly he had emancipated himself, as no doubt was his intention, from the working theory that in every object what is sought is a pleasure, though not the pleasure of success in attaining the object.

And I do not see how Sidgwick himself in the argument of his last lecture (VIII.) really maintains the view which he has vindicated so persistently for Butler, Hume (in some moods) and Hutcheson, *viz.*, the reality of desires which terminate upon their objects. I think he is right in saying (127) that Green has primarily ignored his argument. If I understand it right (it is repeated from *The Methods of Ethics*) it is very curious, and most significant of Sidgwick's position. Pleasure is to be shown to be the one thing "ultimately and intrinsically desirable" (p. 127). To do this, we separate off objective relations, and show that, if they are conceived as ultimately desirable apart from the consciousness accompanying them, this is only under a misapprehension. And granting this separation, which seems to me quaint and untenable (have we here a starting point of Mr. Moore?), we should have to admit the conclusion. Next, the consciousness accompanying them is cut down, so far as its ultimately desirable element is concerned, to feeling in the sense of pleasure, though the *vraisemblance* of the argument depended altogether on the word "consciousness," which admitted consciousness of objects. Is not Green right then in saying (p. 128 foot) that *in the last resort* according to Sidgwick "we can give no meaning to good but pleasure"? Sidgwick replies that he "admits and discusses the view that consciousness may be and is conceived to be preferable on other grounds". This seems an ambiguous sentence. *What* does the author admit? Not, surely, that consciousness may *be* preferable on other grounds, but only that it *may be conceived to be so*. For, as I understand his argument, it is mistakenly so conceived because the grounds are not "distinguished in reflective analysis". Therefore Green's statement, qualified by "in the last resort," holds good. Is not Butler's desire for objects thus in principle cut away?

I think Sidgwick retains it for one purpose, to get across from my pleasure to the pleasure of others. I suggest therefore that his view is "limited Psychological Hedonism," *viz.*, that he thinks Pleasure and nothing else to be desirable in the sense of possessing the quality which alone, on a clear view, can excite desire. (I suppose an action previous to experience of its pleasurableness would have to be set down as instinctive or appetitive.[1]) This psychological conviction—a very natural one, and very hard to escape from—he turns into an intuition. But he retains the doctrine of desires terminating in their objects so far and no further as to enable me to desire another's pleasure, and perhaps to get life started by experience of satisfactions. Otherwise, no objects but my own pleasure are desirable for their own sakes, *i.e.*, such as, when distinctly viewed, to excite desire. If we think we

[1] I am quite aware of the argument of *Methods of Ethics*, I., iv. But is it reconcilable at bottom with that of III., xiv., repeated in Lect. VIII. of the present volume?

desire them, it is a misconception arising from confusion. Is not this contained in the argument in question?

His view, in a way, is very near akin to Green's. They differ only as abstract and concrete. Both believe in a general good, which the individual takes where he finds it most fully, without distinction between himself and others. Only Sidgwick has this odd conviction, as I think it, that the good must be cut down to feeling = pleasure; and so, as seems to some of us, eviscerates it of its content. Sometimes he seems to have a difficulty with egoism and altruism, but really on his own view I do not see why.

As to the sum of pleasures and the good in time I would refer to *Memoir*, cxxxvii., and Nettleship's *Remains*, i., 335-6. I am prepared to admit that the impossibility of a sum of pleasures has been worked too hard. But the difference between a growth and a series remains. It seems plain that a series of feelings need not imply any growth of the soul.

A few words must suffice for the remainder of the book, which is of less philosophical interest. In dealing with Mr. Herbert Spencer's *Data and Principles of Ethics*, Sidgwick has little difficulty in showing that his principal contentions either give no ethical guidance or are unsupported by evidence. The former seems to be true of the conception of Absolute Ethics and of the compromise between Egoism and Altruism. (It is here worth noticing how distinctly the author contends that there is at this point a conflict between rational convictions, unless we assume or prove the moral order of the world (p. 188).) The latter would hold good of the allegation that War is the chief anti-ethical influence. So, too, Mr. Herbert Spencer hardly seems to have the philosophical conceptions at command which would enable him to get a definite result out of the doctrine which he would like to establish. Hence his theory of the moral End, that it is Quantity of life, taking in width as well as length, remains an undeveloped metaphor. Mr. Sidgwick is able triumphantly to show that its coincidence with Pleasure is assumed by Mr. Spencer, and it is by no means established. And yet this conclusion surely should not be altogether satisfactory to Ethical Hedonism. For Quantity of Life undoubtedly suggests an End which has high claims; it, or something very like it, commended itself to Spinoza and perhaps to Plato and Aristotle. Mr. Herbert Spencer's ideal of a view of "Life" which should give results for practice otherwise than through experience of what things are agreeable, fails no doubt to justify itself in its working, and falls away into an empirical Utilitarianism. But one is not convinced that it has had full justice in interpretation and application; and it seems as if the notion or intuition that the greatness of Life might somehow be judged on its merits, was better philosophy at bottom than that to which it is here reduced. The mischief is, perhaps, that life has at first been taken as self-preservation in the narrow sense;

and the attempts to add on other determinations of justice, beneficence and what not, apart from a reconstruction of the idea of self, only heap contradiction on contradiction.

In Mr. Sidgwick's criticism of Martineau (of whose writings I know very little) we seem to get a crucial instance of that separation between motive and consequence which I ventured to refer to above as fatal to ethical theory. Martineau, as is well known, ranked motives according to a scale; Sidgwick holds that intentions directed to outward effects, and not motives as distinguished from intentions, are primarily of consequence in the moral judgment (p. 353). Roughly speaking, Sidgwick's view seems much the better, for motive is to intention as part to whole, and it is much easier to suppose a "good" motive with a "bad" intention, which constantly occurs from ignorance, than a "bad" motive with a "good," *i.e.* enlightened, intention. Still as the latter is possible, *e.g.*, when the selfish part of the good intention is the motive and the rest is mere consequence, we see that neither view is satisfactory. What we would judge, if we could know it, would be the whole foreseen consequences of action, on the one hand, and, on the other, the whole state of mind in acting, according to what, in them, it wills or only accepts or even is averse to.

I should like once more in concluding to recognise the excellence of the Analytical Summary; the only fear is that it may prove too tempting to students.

BERNARD BOSANQUET.

An Essay on Laughter, its Forms, its Causes, its Development and its Value. By JAMES SULLY, M.A., LL.D. London: Longmans, Green & Co., 1902. Pp. xvi., 441.

PROF. SULLY has added a substantial contribution to English psychological literature in his recent entertaining volume on *Laughter*. This latter quality is by no means a universal attribute of the numerous works in existence dealing with some or other aspect of the subject. In the minds of many philosophers an exceptionally serious not to say ascetic temper seems to be an essential requisite for the scientific treatment of this topic. Even Schopenhauer, a thinker by no means devoid of humour, originally, as Prof. Sully reminds us (p. 6), deemed it "superfluous" to illustrate his theory by examples, and when later he took compassion on the "intellectual sluggishness" of his readers his first exhilarating illustration is "the amusing look of the angle formed by the meeting of the tangent and the curve of a circle"! Fortunately for us, Dr. Sully has adopted a different view of the obligations of the scientific psychologist and betrays no timidity lest his reputation as scientist or metaphysician may be compromised by his showing too much indulgence for the human nature which clings even to the student of psychology.

The volume is a considerable production of some 450 pages, divided into twelve chapters. The first is of an introductory character. The next three deal with "the smile and the laugh," "the occasions and causes of laughter," and varieties of the laughable. Chapter v., which from the psychological standpoint is the most important in the book, is in part devoted to an examination of "the theories of the ludicrous". The three chapters which follow discuss "the origin and development of laughter" and "the laughter of the savage". The next two deal with "laughter in social evolution and humour". Chapter xi. treats of "the laughable in art or comedy," whilst the closing chapter of the book is appropriately assigned to the discussion of "the ultimate value and limitations of laughter".

The work as a whole does not, I think, embody the advocacy of any very new theory or of any strikingly original view. Dr. Sully's method here as elsewhere is largely critical and eclectic, and the chief excellence of the work is due, as it seems to me, to the special appropriateness of that method in dealing with this subject and to the special competency of Dr. Sully in applying it here. His extremely wide and varied reading, his power of accurate psychological observation and his well-tempered æsthetic judgment find here ample scope, whilst each chapter of the work affords abundant evidence of the combination of all these qualifications in the author. There is little room nowadays for a new theory of laughter and M. Dugas in his *Psychologie du Rire*, which appeared early last year, starts frankly with the statement: "*Nous n'avions plus qu'un moyen d'être original, c'était de renoncer à l'être*". At the same time Prof. Sully is, I believe, justified in describing his work as "the first attempt to treat on a considerable scale the whole subject of Laughter under its various aspects, and in its various connexions with our serious activities and interests" (p. 7). For, although M. Dugas's book, to which Prof. Sully refers in some footnotes, appeared whilst the volume of the latter was going through the press, and runs on very much the same lines in the matter which they treat in common, nevertheless, the larger part of the English work deals with questions which are but briefly or not at all discussed in the clear and compact little volume of the French writer.

In his opening chapter Prof. Sully skilfully introduces his readers into the heart of the subject by the examination of a concrete case of laughter taken from Lipps. What is it that amuses in the sight of a man wearing a child's hat and *vice versa?* Having decided against both Lipps and Schopenhauer on this point, he investigates the physiology of the smile and the laugh in chapter ii. As to the hygienic qualities of this function, whilst agreeing that in general its effects are beneficial, Prof. Sully's approbation of laughter as a "muscular exercise" seems to be more qualified than that of Herbert Spencer. Excessive prolongation will be weakening rather than strengthening, and may result in flabby collapse. He appears

to adopt Darwin's explanation of the tears being due to the contraction of the muscles compressing the gorged ocular blood-vessels. From Prof. James's theory that the emotion of laughter is mainly consciousness of accomplished motor effects occasioned by the perception of the ludicrous Dr. Sully dissents; but he allows that "though the bodily reverberation is not everything in an emotion it is an important part," and "the large expansion of the area of nervous commotion throughout the bodily system gives added life and a more distinctive character to the enjoyment of fun" (p. 44). This seems to me the true view, but I am under the impression that it is not widely different from Prof. James's later teaching on the subject, as he has, I understand, toned down his earlier exaggerated though useful insistence, on the constituent part which is undoubtedly played by the bodily sensations in all the more violent emotions.

Passing on to the more elementary causes of laughter the author allots an interesting section of sixteen pages (pp. 50-66) to the subject of *tickling*. The reactions he holds, in agreement with Drs. Hill and Robinson, are partly of a "defensive character," partly "expressive of enjoyment" (p. 56). The consciousness is complex and the conclusion of Prof. Sully's analysis is that "the laughter excited by tickling is not a net effect of the sensory stimulation," but its conditions also include "a *higher psychical factor*, namely, an apperceptive process or assignment of *meaning* to the sensations," an inference borne out by the fact that the laughter-reaction occurs first of all (to give the earliest date) in the second month—presumably in the "second half of this month" (p. 59). That the "interpretation" is the decisive element in eliciting laughter may be tested by any reader who is conscious of a creepy-skin sensation by mentally ascribing it either to a parasite or to some properly ticklish cause (p. 60). I confess I am not convinced by this reasoning. That the laughter caused by tickling is originally purely physical and reflex seems to me far more probable; and the fact that the reaction in the infant can be evoked so early as the seventh week instead of establishing the psychical apperceptive link contended for by Prof. Sully seems to me to point the other way. Certain reflexes as well as instinctive actions require a ripening of the co-ordinating nerve-centres and when once this has taken place the appropriate motor reactions speedily exhibit themselves, as Prof. James has shown. That at a later age when associations have been consciously formed mental suggestion should either intensify or inhibit laughter which was originally the direct effect of physical stimulations is explicable by the ordinary laws. We have in laughter, it seems to me, a good instance of "plurality of causes". The phenomenon may be the effect of a physical excitant, or of a rational perception, or of both combined.

From this the author passes on to some judicious observations with respect to the manner in which joyous feeling in general conduces to laughter, the "play-attitude," the "teasing impulse,"

"practical joking," combat and the strain of solemn situations. The next forty pages are devoted to a description and classification of the leading groups of laughable things as an introduction to chapter v. Of all topics dealt with in the volume that handled in this chapter, the chief "theories of the ludicrous," has possessed by far the most interest and importance in the eyes of the philosophical student. Although the chapter contains much sound and acute criticism, I confess I had anticipated and would have welcomed a fuller and more exhaustive treatment of this subject in so large a work, a book, moreover, which devotes so much space to many comparatively minor questions. At the same time I frankly admit that this is a matter of personal taste. Still it is worthy of note that M. Dugas allots nearly three-fourths of his volume to this topic. Indeed the two books well merit comparison on this subject. The similarity of stand-point and view of the two independent thinkers is very marked. Both criticise substantially the same theories, both follow in the main the same lines, and both, apart from differences of detail, seem to come to much the same conclusion.

Dr. Sully begins with the examination of the "theory of Degradation" (p. 119), including under it the contributions of Aristotle, Hobbes and Prof. Bain. In the brief observation of the first that the ludicrous (τὸ γελοῖον) is a subdivision of the ugly (τοῦ αἰσχροῦ) and "consists in some defect or ugliness which is not painful or destructive" Dr. Sully finds the "germ of the principle of degradation" (p. 120). The famous statement of Hobbes that "the passion of laughter is nothing else but a sudden glory arising from a sudden conception of some eminency in ourselves, by comparison with the inferiority of others, or with our own formerly" presents, he considers, "a more careful attempt to construct a theory of the ludicrous by reference to something low or degraded" (p. 120). Finally, in Bain's definition of "the occasion of the ludicrous" as "the degradation of some person or interest possessing dignity in circumstances that excite no other strong emotion," he finds as further improvements that consciousness of our own superiority need not come in, that the degraded object need not be a person, and also, as in Aristotle's theory, the limiting conditions (p. 122). With respect to both Hobbes and Bain the author's criticism seems to me just and discerning. Though apart from the sardonic egoism in which Hobbes takes such delight, and from the consequent one-sidedness which it gives to so many of his views, his account of the "sudden glory" arising from the sudden consciousness of "some eminency in ourselves" is, I believe, one of the most real contributions that has come from any quarter. But Prof. Sully is right in urging "that in the enjoyment of many forms of the ludicrous" we certainly are not "consciously realising our superiority to another," and that it fails to give "an exhaustive account of the several varieties of our laughing satisfaction," especially of good-humoured laughter and children's merriment.

I think, however, there is more in Aristotle's observation than Prof. Sully quite recognises. It seems to me that the "germ of the degradation theory" is rather to be found in Plato (*Philebus*, 48-50) than in Aristotle. The latter, as Prof. Butcher points out,[1] had before him Plato's analysis of the emotions excited by comedy, in which the author of the *Philebus* anticipates at least part of Hobbes's theory—the malicious pleasure springing from the sight of the misfortune or abasement of others—yet Aristotle deliberately omits this, whilst he inserts the limiting condition that the defect "be not painful or destructive" either to the laugher or the laughed at.[2] The deformity in fact must not be such as to excite pity or any counteracting feeling. If, as Prof. Butcher urges (*loc. cit.*), the 'defect' primarily applicable to the physically ugly be extended to include "the disproportionate" in human nature, it may perhaps in connexion with Aristotle's idea of Beauty be interpreted to cover "the incongruities of life in general".

The author next discusses the "incongruity" or "intellectualist" theory, as Dugas calls it. Dr. Sully describes it as characteristically German. He takes Kant as "the first great representative" (p. 126) of this view and finds the Kantian school generally here, as in *Ethics*, accentuating the rationalistic quality of the mental process in marked opposition to the emotional or "moral sentiment" aspect insisted on by British ethical writers. The observation is in the main true, but Beattie and Campbell seem to have escaped Prof. Sully's notice. Both writers, especially the former, expounded the intellectualist theory in a manner very much superior to that of Kant nearly a score of years before the *Kritik of Judgment*.[3]

Kant's own briefly expressed anti-climax view that the feeling of the ludicrous is "an affection arising from the sudden transformation of a strained expectation into nothing" Dr. Sully rightly pronounces "absurdly inadequate" (p. 126). Neither the intellectualist nor the emotionalist theory gives a complete account of the enjoyment of the laughable. Still, I think, the element of "dissolved expectation" or "surprise" is a more important factor than the author is inclined to allow (pp. 129-130). The "suddenness" of the consciousness, emphasised in the analyses of Hobbes and Bain as well as by the intellectualist school, seems to me to point to the same fact.

I confess, however, that I am less satisfied with his criticism of Schopenhauer. He says: "According to this writer the process

[1] *Aristotle's Theory of Poetry and Fine Art*, pp. 365-367.

[2] *τὸ γὰρ γελοῖόν ἐστιν ἁμάρτημά τι καὶ αἶσχος ἀνώδυνον καὶ οὐ φθαρτικόν, οἷον εὐθὺς τὸ γελοῖον πρόσωπον αἰσχρόν τι καὶ διεστραμμένον ἄνευ ὀδύνης* (*Poetics*, v., 1).

[3] See Beattie's *Essays on Laughter, etc.*, chaps. ii., iii., especially p. 419; and G. Campbell's *Philosophy of Rhetoric*, bk. i., chaps. ii., iii. Nay, Hutcheson himself approximates very closely to the intellectualist theory. See Beattie, p. 314.

which determines our laughter is describable as an intellectual effort and its frustration. 'In every instance (Schopenhauer tells us) the phenomenon of laughter indicates the sudden perception of an incongruity between a conception (*Begriff*), and a real object which is to be understood or 'thought' through this conception'" (p. 130). Against this Dr. Sully urges that the calling up of this general representation is only occasional and not necessary. "To recognise a weasel we do not need to have a pictorial idea or image of a weasel as formed from past observations" (p. 14). Similarly, "when I envisage a person as oddly dressed I do not need to have a schematic representation of the proper style of dress. The same holds good in many cases in which a rule of good manners is broken" (p. 131). At most we have a "conceptual *tendency*," an "apperceptive acceptance or rejection of a presentation". Laughter at harmless vices does not imply the simultaneous presence of this "exalted concept" of a perfectly virtuous man. Further, were this true we ought to laugh most at the frailties, *e.g.*, of Falstaff, when first revealed, whereas we laugh more freely when his rascality has become familiar.

This criticism does not seem to me to be conclusive. When Schopenhauer constitutes the ludicrous in an incongruity between an object and the conception (*Begriff*) under which it tends to be thought I doubt very much if by "*Begriff*" he means "a pictorial image," a "schematic representation," or even "a generic image" in Mr. Sully's sense. It is at least possible to realise in consciousness a *general rule*, *e.g.*, Schopenhauer's example "Cheats are to be ejected," by a thought which is not merely an *image*. Further, when we pronounce an occurrence to be irregular or in conflict with the rule the *meaning* of the rule is present to the mind, and this, I think, is something more than an apperceptive 'tendency,' though possibly Mr. Sully may be able to enlarge the significance of this term so as to include in it Schopenhauer's *Begriff*. But the question obviously would plunge us in the deeper strata of *Erkenntnisstheorie*. The further argument does not seem to me to possess real force. The contemplation of the consistency of the delinquent's character affords a new pleasurable excitement. If there be no variety in subsequent cases the pleasure will speedily diminish. The general outcome, however, of Prof. Sully's criticism seems to me thoroughly justified. "Neither of the two chief types of theory covers the whole field of the laughable, each has its proper limited domain" (p. 136).

I have already occupied so much space that I am unfortunately precluded from discussing Dr. Sully's treatment of the origin of laughter. I regret till more that there is not room for me to dwell on the pair of long and excellent chapters on "Humour" and "Comedy" in which the author's powers are seen at their best. I have only to say before I close that the reader will find in this volume of Prof. Sully a most interesting and instructive work. Independently of the valuable information and of the happy and

stimulating illustrations from all quarters of literature in which the book abounds, the student of psychology will derive much benefit from the study of the manner in which skilful psychological observation finds rich and fruitful material for analysis and reflexion, for thought and recreation, not only in the higher fields of literature and of art, but in every stage of human existence and in the homeliest experiences of domestic life.

MICHAEL MAHER, S.J.

The Republic of Plato. Edited with critical notes, commentary and appendices by JAMES ADAM, M.A., Hon. LL.D. of Aberdeen University, Fellow and Senior Tutor of Emmanuel College, Cambridge. Cambridge: At the University Press, 1902. Pp. xvi., 364; vi., 532.

THOUGH an introductory volume is still to publish, Dr. Adam can look back upon the accomplishment of at least the more arduous part of a great undertaking. He is to be warmly congratulated upon the completion of his anxiously looked for commentary on Plato's *Republic*, and that it is so eminently worthy of the imprimatur of his University.

In its first intention it is a contribution to Greek philology in the narrower sense, much occupied with grammatical constructions, with the force of particles, and with conjectural emendations. It is from this point of view not unnatural that it avows greater indebtedness to Schneider than to any other single commentator. Equally significant is the restriction of the use of post-Platonic criticism, from Aristotle downward, to matters in which this subserves the interpretation of Plato as he stands written. And if the history of Platonism is excluded from the purview, still less is there any concession to the temptation to construe Plato in the light of modern political, religious or philosophical theory. It is perhaps rather because of Dr. Adam's observance of such limitations than in despite of them that amateurs of Plato and of ancient philosophy, even if they have no interest in μέν save as bearing on the humanities, will find this commentary practically indispensable.

For, at his best, Dr. Adam is very good indeed. And this whether in appendix or in note. The appendices to the several books, which, as indicated on the title-page, constitute a marked feature of the work, are sometimes devoted to difficulties of reading or translation, the discussion of which has outgrown the limits of footnotes, but not infrequently they are in effect concise monographs, which, in combination with the local notes, form each a very solid body of teaching on some point in the subject matter or speculations connected therewith. Of these the most forcible to our thinking is that on the propædeutic studies of the guardians.

Excellent, too, in his way is that on the number, which has gained in cogency, alike by Dr. Adam's willingness to learn of, and by his eagerness to meet, Dr. Monro's criticism of it in its earlier form. With existing materials it is unlikely that the riddle has much chance of a closer solution. The appendix on the relation of Plato's commune to the Ecclesiazusæ of Aristophanes is also a sound piece of work. That on the astronomy in the story of Er in book x., which allows a debt to the acuteness of Prof. Cook Wilson, is, with the notes corresponding, less successful, perhaps —as a friend suggests to me—because of its unproved assumption as to the topographical position of the λειμών, and its taking of the similitude of the trireme too seriously.

Dr. Adam's quality, however, is at least as open to be discovered in some element of freshness and suggestiveness in the notes proper. A favourable example to our mind is the note on 437 E, with its justification of the contrast between thirst + heat desiring cold, thirst + muchness desiring much drink. 'The solution of the difficulty is to be found in the different character of the notions θερμότης and πλῆθος. Θερμότης is something distinct from δίψος, though superadded to it, for which reason Plato does not use the expression θερμὸν δῖψος; whereas πλῆθος is in reality πλῆθος δίψης, and πολλὴ δίψα, as experience shows, desires much drink.' Or, to take one more instance among many, the note on 454 D, with its explanation of the origin of the MS. reading emended.

If we add that Dr. Adam is learned alike in the ephemeral literature of his subject and in more solid contributions to the history of Greek ideas, such as Rohde's — to name *pietatis causa* but one of the profounder scholars; that while using the very latest lights, he knows and values the 'auld lichts' too, it will be understood that Dr. Adam's work must be taken very seriously. That his running analysis, too, is good, and his indexing not inadequate is a matter of course. He is even singularly happy in his too rare illustrations from English poetry.

It is because Dr. Adam's work is so good, and so certain to exercise a legitimate influence upon the interpretation of Plato and Platonism, that, at the risk of some appearance of an inversion of the part of Balaam—that an ass might fitly rebuke—we venture to note points in reference to which our author's explanations of and inferences from certain passages display some perversity of Judgment, *quandoque dormitat.* It is to be hoped that no one will follow him, for instance, in his view of the simile of the cave. Dr. Adam equates the shadows thrown by the fire upon the back of the cave not with the concrete things of the world outside, but with the shadows of these cast by the sun (vol. ii., p. 95). Dr. Adam seems to need for his correction a pool within the cave to reflect the shadows. Again Dr. Adam places the fire well within the mouth of the cave and the cave's wall far down, thus adding to the artificiality of the parable, since it inevitably makes the carriers of the dummies not unknown passers-by, but

conscious players for the shadow-picture which is this world's illusion. We say confidently that the shadows which are all that the bound prisoners see correspond to the concrete particulars of the visible world, that Plato's wall runs on the caveward side of a road passing the mouth of the cave, and that the μακρὰν of 514 A refers not to the dimensions of the cave from front to back, but to the breadth of its mouth. The mouth is wide and the breadth at the mouth is the same as at the front where the row of prisoners is bound. The εἴσοδος might be wide but wider or narrower than the main part of the cave, or it might be of uniform width with the cave and yet not wide enough for any simultaneous variety of παραφέροντες and σκευαστά. Hence neither phrase is otiose.

In 590 B we have no sort of doubt that the snaky element is appetitive and not concerned with the θυμοειδὲς at all. The construction of the article only gives a sort of unity to the non-rational soul as made up of spirit and concupiscence. The 'degenerate kinds' of θυμὸς by which Dr. Adam explains simply do not exist in Plato. The effect of bad nurture upon spirit (441 A, as limited by 440 B, and illustrated by 411 B) can only be interpreted as atrophy, never as perversion. Δυσκολία is not a low type of θυμὸς, but a type of character deficient in θυμός. Like conscience Plato's θυμὸς may be numbed, it cannot be vitiated.

In 437 D, ingenious as Dr. Adam's note is, we cannot think that the relevance of the argument depends upon a cast forward to 438 A. Rather it is a reply to a possible objection that, inasmuch as there is an opposition between appetites, the canon that what may be found in contradiction cannot be identical might be taken to prove that appetite is not one but many, and that the 'parts' of the soul are not three but indefinite in number, with disastrous results to the parallel of state and individual. Nay, says Plato in effect, the opposition of appetites is only in virtue of their προσγιγνόμενα, and contrary προσγιγνόμενα, whose opposition alone could be fundamental, do not coexist in the same soul. Different appetites are only opposed then accidentally.

In 511 D we are quite satisfied alike with the construction with καίτοι, and with the explanation which has been expressed in print most concisely by Prof. Campbell. The higher νοητὰ, *i.e.*, all ideas short of the Good, are not μετὰ ἀρχῆς in Plato's sense as Dr. Adam alleges (vol. ii., p. 87). The ground of the view lies perhaps in Dr. Adam's conviction (ad 505 A) that the Good is to be identified with God, mainly 'on the principle that things which are equal to the same thing are equal to one another'. Despite of some passages pointing to identification—379 B, C is one, even though the Idea of Good is not yet in question—this seems doubtful. In the *Timæus* that which in our view corresponds to the Idea of Good, whatever Cambridge Platonism may say to the contrary, is distinguished from God. And things which are unequal to the same thing are unequal to one another.

In the scheme in 587 D the interpolated stages have no existence in Plato, and, therefore, need no conjectural interpretation. In view of the otherwise pointedness of the note here as to the reasonableness of the increase of 'the modulus of progression,' the declension upon 'stages in the gradual degeneration of the oligarch' is somewhat disappointing.

But for the rest we resist the temptation which so stimulating a book as Dr. Adam's presents to the reviewer to argue for divergent views. It remains to say something of his text. Dr. Adam published a text of the *Republic* so lately as 1897, and the present variants from that text are numerous. Either that text was constructed on inadequate principles—and Dr. Adam expressly affirms that his principle of textual editing has remained the same—or he had not sufficiently summered and wintered what he then printed. That he displays an open mind, and that his present text is the more conservative of the two, are facts which perhaps may go down to the editor's credit, but such notes as 'I think that Plato wrote' so and so, 'although I have not ventured to change the text' (ad 453 D), and again, 'the insertion of καὶ τινὸς after τῶν τινὸς appears to me to solve all the difficulties' (vol. i., p. 271), when Dr. Adam having printed that as his text of 1897 has withdrawn it from his text for the present edition, give strong reason to doubt whether Dr. Adam's temperament is one fitted for the responsibilities of the editing of texts. Of Dr. Adam's own conjectures that in 580 D is certain, that in 454 D almost so. One which he himself has not the courage to print in 439 A is seductive. That in 507 B is due to a mistaken view of the translation. Our editor's claim to have originated the reading γιγνωσκομένην in 508 E involves a curious lapse of memory. He is to be congratulated on having, like Prof. Burnet, restored the οὐδ' ἂν ἥξει of 615 D. We could ill afford to lose what an Oxford undergraduate once described as 'the modified future of eschatological uncertainty'!

HERBERT W. BLUNT.

Spinoza's Political and Ethical Philosophy. By ROBERT A. DUFF. Glasgow: James Maclehose & Sons. 8vo, pp. xii., 516.

THIS is to the present reviewer a puzzling book. I should have liked the criticism of it to fall into the hands of some one who could find Mr. Duff's point of view more congenial than I do, or be sure of having found it at all. There is no question about Mr. Duff's knowledge of his text; he knows it very well. His exposition of particular passages in Spinoza leaves little to be desired. Yet there is an indescribable air of paradox all through; and the fundamental thesis is intensely paradoxical, unless all students of Spinoza and of political philosophy have been wrong together. It is thus stated in the preface: 'Spinoza had no interest in meta-

physics for its own sake, while he was passionately interested in moral and political problems'. There are two obvious remarks to be made on this. First, Mr. Duff himself has found it necessary to devote about one-third of his book to the metaphysical and psychological part of the system. Next, he seems to have reached his conclusion by leaving out of sight most of the previous history of moral and political speculation, and the attitude of most philosophers towards practice and the problems of conduct. Spinoza certainly did aim at making his philosophy furnish a guide to the conduct of life. One is tempted to ask what philosopher has not done so, and what metaphysician ever did give proof, according to Mr. Duff's test, of interest in metaphysics for its own sake. For my own part I should be well pleased if philosophers were bolder in asserting that pure speculation has as much right to exist as any other human faculty, and finds in its normal exercise its own sufficient justification and reward. But such is not the common usage. What did Descartes put forth as the object of his quest? 'Marcher avec assurance en cette vie'. Leibniz appears to have recoiled from Spinoza for thoroughly practical reasons. In Hume, perhaps, if anywhere, we may find 'metaphysics for its own sake'; and yet the precursor of the critical philosophy was also the destroyer, not without political motives, of the Social Contract. What, again, of Kant and his Practical Reason, and all the various forms of *Naturrecht*, or the contradiction thereof, produced by all the moderns? Was Schopenhauer more a metaphysician than Spinoza, and if so, why? Metaphysics are subordinate enough with Nietzsche, no doubt. But if Mr. Duff's dialectic is to land us in a classification of philosophies that sets off Spinoza and Nietzsche by themselves *contra mundum*, I cannot help thinking there is something wrong with the premisses. Like one or two other acute commentators, Mr. Duff seems to think that Spinoza's system can be explained as it were in a vacuum, as a unique and unhistorical phenomenon; though he must needs admit (Spinoza himself having done so) that there was such a person as Thomas Hobbes. Mr. Duff, by the way, has not noticed that the reservation of a certain amount of 'natural right' by the individual is quite as clearly laid down by Hobbes as by Spinoza, though not to the same extent; but that is a minor point. Well, it is not for me to avenge history.

Now the worst of the puzzle is to come. Mr. Duff undertakes to prove his thesis; he must believe that he has at least made it plausible; but I am wholly unable to appreciate his proof. I cannot find it anywhere; I cannot even find what Mr. Duff supposes it to be, beyond the existence of the *Tractatus Politicus*. There is plenty of good writing, plenty of knowledge in detail; but nothing, to my mind, at all tending to prove that Spinoza regarded the *Tractatus Politicus* as the real master-work for which the *Ethics* was merely preparation. I am sorry for my obtuseness, and can only confess it, and wish that Mr. Duff had given us an analytical

table of contents. One thing, indeed, does occur to me as significant, but I am far from sure that it is the real clue. Mr. Duff has very little to say of the fifth Part of the *Ethics* or of the difference, already set forth in the *Tractatus Theologico-politicus*, between the two ways of salvation or happiness, the way of obedience which is for the many and the way of the higher reason which is for the few. This difference was for Spinoza, whether we like it or not, a capital fact. On that point his mind was Eastern and not Western. Very hard is the way of true wisdom, and to the multitude it is foolishness.

> On the road to Laílá's mansion, the which is full perilous,
> The condition of taking the first step is that thou be mad as Majrún.

The wise man is not governed by rule; if his actions outwardly conform to rule, it is because he freely judges it reasonable so to act. But for the rest obedience is good and needful.

Now Mr. Duff appears, though I speak with diffidence, to hold that Spinoza desired and expected to lead men into the path of wisdom by providing them with improved political institutions. Not that he says so in terms, but I cannot explain his general attitude otherwise. Let us go back to the text of the second chapter of the *Tractatus Politicus*.

'I understand by the law of nature the statutes or rules of nature according to which all things happen, that is, merely the power of nature. And thus the natural right of the whole of nature, and by consequence of each several individual, doth extend so far forth as its power; consequently whatever every man does by the rules of his own nature, that he does by perfect natural right, and hath right over nature so far as by his power he may.

'If human nature were so constituted that men lived wholly after the precepts of reason, and aimed at naught else, then natural right, so far as we consider it as belonging to mankind in special [for every species has its proper *ius naturæ* according to its faculties] would be defined wholly by the power of reason. But men are led by blind appetite rather than reason, and accordingly men's natural power or right must be limited not by reason but by whatsoever motive determines them to act and to maintain themselves in being.'

Men increase their 'natural right' (a term from which, in Spinoza's sense, all ethical implications are carefully excluded) by co-operation, and this is the necessary foundation of society and government. For what sort of men, then, are political institutions framed? Not for the wise man but for the *Naturmensch*, the ordinary man acting upon ordinary motives of desire and passion; and the business of political science is to design the machinery which will best regulate the effects of those motives, taking them as they are, and subdue them to the purposes of a stable commonwealth. 'Imperii causas [*l.* causæ] et fundamenta naturalia non ex Rationis documentis petenda sed ex hominum communi natura seu con-

ditione deducenda sunt' (cap. i. *ad fin.*). Spinoza has no enthusiasm about the State. Some kind of State there must be, and we have to make it the best we can with the given materials. I submit that any view which would make out Spinoza to be a progressive social reformer is clearly ruled out by Spinoza himself. He would probably have said, if asked, that the chances of a citizen becoming a philosopher are better under a good government than under a bad one; but that is not his main object. Salvation in the higher sense, the attainment of wisdom and tranquillity, is an affair of the individual, as indeed all the great moralists have said. Government is versed in that which is external and manifest; the working standard of the law can only be that of the average good citizen, as indeed all the great publicists have said or assumed. There is not even anything to show that Spinoza hoped for any appreciable improvement of the general standard. He certainly did not expect any discoveries in the field of political institutions, and had no suspicion of the constructive work, partly conscious and partly unconscious, that was beginning in England. There is no prophetic strain in his politics; Locke was already looking farther forward. Montesquieu may have been inspired later by Spinoza, though he was bound to disclaim it; but the inspiration was somewhat indirect, and in any case through the *Tractatus Theologico-politicus*, not the *Politicus*. Grotius had sent forth the law of nations conquering and to conquer; Spinoza has no word to say of this great enterprise, and I doubt whether he knew or cared at all about it. Paradox may be ingenious and even brilliant, but paradox it remains. It is true that on the practical points of legislation and administration Spinoza was far more enlightened than the accepted authorities of his time; but that is not enough to justify Mr. Duff's position.

As a matter of minute criticism, I should like to know why Mr. Duff constantly speaks of *conatus sese conservandi*, a form of words unfamiliar to me, and, so far as I am aware, never used by Spinoza himself. His phrase is 'suum esse conservare'.

Perhaps I may be allowed to call attention here, though it is not strictly relevant, to a scholarly Latin tract containing some certain and many probable emendations of Spinoza's text (*Ad Spinozæ opera posthuma:* scripsit Dr. J. H. Leopold: Hag. Com., 1902), which I have not seen noticed in this country.

F. Pollock.

IX.—NEW BOOKS.

Life in Mind and Conduct: Studies of Organic in Human Nature. By Henry Maudsley, M.D. London: Macmillan & Co., Limited, 1902. Pp. xv., 444.

The contents of this book are sufficiently indicated by the chapter headings: Life and Mind; The Social System; Imagination and Idealism; Ethical Theory and Action; Religion, Philosophy and Science; Habit, Intonation, Experience and Truth; Education, Mental Culture and Character; Friendship, Love, Desire, Grief and Joy; Fate, Folly and Crime; Pain, Life and Death. "There has been no thought of writing a methodical treatise nor of setting forth any system of doctrine. By bringing several subjects usually treated as if they were separate, and for the most part abstractly, into touch with the realities of organic life and into vital relations with one another, they are put into positions in which they may be safely left to suggest their own lessons. Nor is there anything new in the moral reflexions made, which for the most part have been made over and over again . . ." (p. 15). It appears to be the work of a man who in his leisure moments has jotted down the thoughts on the above-mentioned topics, which from time to time must occur to every reflective mind. These notes have been worked up with great care into book language. Here and there occur passages with which perhaps most readers will be found to disagree, and too often the style passes beyond the limits of dignity into the grotesque. In the main, however, such as have the leisure to peruse the work will find it interesting and at times suggestive. Its pages express with fair accuracy the general opinion of liberally educated men at the present day.

Within the short limits of this notice it is impossible to quote the many excellent passages with which the book abounds. The sections dealing with the social system, with religion, the ideal and with mental culture are particularly well conceived, albeit tinged too deeply with pessimism. At the same time, as is inevitable in a work of this kind, statements have crept in which have little or no justification in fact, or which appear to be contradicted elsewhere in the work. On page 32 we are told that "it would be wrong to perceive feeling in the lowest form of living monad reacting fitly to its stimulus, though it give all the signs of that which were it deemed conscious would be feeling, for it is destitute of that which observation shows to be the necessary physical basis of consciousness." On page 37 we read, "that which is *irritability* in muscular substance becomes *excitability* in nervous substance". Surely this contradicts the principle of continuity in nature insisted on at page 14 and again at page 33. Moreover, muscular substance is characterised by excitability as well as by irritability. The limitation of excitability, irritability, respiration, feeling, and the

other properties of living substance to those tissues in which they are most evident may be advantageous from a practical standpoint. But, philosophically, who can define where, for example, feeling ends or consciousness begins? What is "that which observation shows to be the necessary physical basis of consciousness"? Our physiological knowledge, too, is all against the view urged on page 24 that "the actual living molecule which is spent in function does not renew itself and live again. . . ." Again and again (pp. 53, 113, 144, 346, 347), the old notion, perhaps last suggested by Erasmus Darwin, is revived, that the future qualities of the offspring are directly influenced by the feelings of the parents during the act of procreation.

The weakest side of the book is the psychological. One might have expected some interesting application of the writer's long experiences in the management and behaviour of the insane to the problems under consideration; but there is little said under this head, and nothing of it new or suggestive. We read (p. 43) that the "idea is impotent to act, it has no motive force in it; it is simply the form, clear or obscure, distinct or vague, through which the force of feeling works well or ill to its end." "Although feeling supplies the motive force of will, yet feeling itself is not original but derivative, being the conscious outcome of the fundamental attraction or repulsion in the nervous element whose excitability has been affected by the impression. . . . Will comes out at last as organic irritability raised to its highest terms of cerebral expression . . ." (p. 47). Imagination "does duty for a noble faculty of mind working independently of other faculties, owing little or nothing to them, needing no physical basis for its flights, moved by a quasi-divine influx" (p. 82). "No one then need flatter himself that he can have sound imagination without sound reason, or the highest imagination without the highest reason" (p. 83). Compare, likewise, the discussion as to the relative importance for the offspring of the "intellectual" and "affective" elements of the parents (p. 347 ff.), or the absurd dilemma raised to explain the cries and struggles of the anæsthetised animal (p. 398). Yet this is the author, who urges that "the study of mind ought to be prosecuted patiently by the objective method of scientific inquiry used in all the other sciences, the hope to know its true nature and function by the purely subjective method of introspection being given up as exhausted, if not as barren . . ." (p. 209); who disdains "to be ruled by authority, tradition, custom, words and phrases" (p. 191); who is well aware of "the custom to mistake familiarity of words for understanding of things when there is no real understanding of them . . ." (p. 5).

A paragraph in the chapter on Love starts: "All this because the nervous molecules of two brains thrill intensely in unison!" (p. 307). On page 205 the "requisite nervous tension" of attention is compared to "the polarisation of molecules". Indeed the style and language varies with the value of the material which it has to clothe. We have brought forward some of the most prominent instances, showing that even the author is sometimes "completely captured and captivated by forms and phrases" (p. 116). Doubtless "the erections (*sic*) of such unsubstantial fabrics of speculation is a wonderfully pleasing exercise of the imagination uninformed and unruled by positive knowledge" (p. 191); doubtless greater self-control would have saved the author from being so often hoist with his own petard. The book contains so much that is interesting, well written and worth reading, that it is a thousand pities that much which is uncertain, erroneous, or ill expressed should have been permitted to pass unexpunged.

C. S. Myers.

Analytical Psychology. By Lightner Witmer. Boston and London: Ginn & Company.

This manual is written for beginners in psychology and for students of pedagogy in normal schools. It is an attempt to apply a semi-heuristic method in introductory psychology. The preface is a useful pedagogical introduction which points out and justifies the method adopted, which, broadly speaking, is as follows :—

A simple diagram or an experiment involving little apparatus is given. Students are required to observe and, apparently, to come to their own conclusions, though the plan of the book includes some discussion as to explanation after most of the experiments indicated. Perhaps it is inevitable that the explanations often enough involve so much more than depends upon the particular experiment or, indeed, upon preceding ones. It is doubtless good to refrain from "catchy definitions," but I incline to think that, for adult students, some sort of preliminary delimitation of the terms employed, *e.g.*, sensation, apperception, conception, etc., may not only be useful to the pupil, but may tend to preserve greater uniformity of meaning for the same term on the part of the writer.

The term 'apperception' seems indeed to owe its importance to the fact that it is used in a vague way for any operation from the side of the subject. Sometimes it is selective activity, sometimes it is the result of accumulated experience, sometimes it refers to purely individual mental characteristics and innate aptitudes; the various senses in which the term is used being far from clearly indicated.

The treatment of 'attention' again is curiously mixed; it seems at one time to be a coefficient of sensation, and at another time to be independent of mental contents, causing them to wax and wane periodically. Just as in the elementary teaching of Natural Science it is better to begin with unquantified notions which the common experience of daily life may give, and from this suggestive knowledge to proceed to definite, detailed, and quantified experiment, so it would be well to let the common psychological experiences of daily life yield preliminary notions as to the meaning of terms, and thus lead to the specific experiments which are, in this book, alone treated.

There is, I venture to suggest, too much talk of images; their function is overrated; recognition is certainly prior to imagery, and it would seem from recent experiment that even accuracy of comparison is not assisted by them. It cannot be too frequently insisted upon that the modification due to past experience and influencing present experience may have little relation to imagery at all.

It is satisfactory to find that attention and physiological adjustment are not confused. Eye-movement is one thing, attention-movement is another. Frowning and hard breathing indicate effort, but are they proportional to activity? The most attentively active persons do without them.

Voluntary movement requires "the apperception with great vividness of those ideas which initiate the various movements of the body". Does not this approximate to ideo-motor action, and is the vividness of the idea of the movement necessary to voluntary action as such?

Colour contrast receives an unusual explanation; "apperceptional expectancy" solves the difficulty. You expect so much of a colour because you see a lot of it; in fact you expect it so much that when, in the space not thus coloured, you see something else, you tend to see the very opposite of what you expected. It does not seem impossible to explain certain illusions of weight in connexion with volume by such a

principle, though to me more purely physiological interpretations of colour contrast seem better.

"The perception of a word requires one act of attention, the perception of a letter requires another and different act of attention" (p. 59). All this section must prove of great value to teachers, and a full grasp of it would have prevented the rather disastrous blunder in vogue in elementary schools during the last few years, namely, that to read words enough and often enough would suffice in time to produce accurate spelling.

To look at a design attentively and to successively observe its component parts is called its "exploitation". Much of this section is good, but is there not some tendency to make our spatial estimates dependent upon our estimates of time of movement? Space judgments with young children are much more accurate than time judgments and, we should suppose, precede them. Doubtless we cannot rule out the influence of "exploitation" in visual illusion, but we must remember that with instantaneous illumination, which allows no time for movement, many, if not all, of these illusions persist.

There seems some confusion between Visual Images and Objects. "Visual Images are therefore seen as though projected outward into space." True, but these are not the visual objects. It is not projected Visual Images which are associated with other mental contents to form the objects of daily life. You can, for example, project the image anywhere, and its size will vary accordingly; but you do not mistake it for the object. And there is good reason to believe that perception of distance is prior to imagery altogether.

Inhibition is described as a failure to give attention; but is it not a positive process? We can sit still for two reasons, (1) because we do not want to move, (2) because we do not permit our desire for movement to pass into action. It is the second case in which inhibition comes into play.

The treatment of specific nervous energy is particularly good. The dictum that "we feel our nerves and not the external stimuli" is rightly criticised, but the antagonistic doctrine, that our nervous reactions are completely determined by external stimuli, is also controverted.

On the whole this book furnishes a suitable introduction to psychological work, superior from the practical point of view to those treatises which deal with experiments requiring elaborate apparatus, surcharged, as they often are, with premature mathematical formulæ.

W. H. Winch.

Psychopathological Researches: Studies in Mental Dissociation. With Text Figures and ten Plates. Boris Sidis, M.A., Ph.D., Director of the Psychopathological Laboratory. New York: G. E. Stechert, 1902. Pp. xxii., 329.

This volume, which is edited by Dr. Sidis, contains papers by the editor, Dr. W. A. White, and Dr. G. M. Parker, giving a record of work done in connexion with the psychopathological laboratory. Dr. Sidis states in the introduction that they have tried to avoid theories and principles and give simply a *résumé* of the facts and experiments, the general conclusions and principles being left to a future work with the title *Principles of Psychology and Psychopathology*. The authors however have not by any means succeeded in avoiding theories; in fact one of the prominent features of the volume is the constant recurrence to the principles of explanation adopted by Dr. Sidis and the other contributors.

In the introduction to the volume by Dr. Sidis, the theory of mental dissociation is brought forward as the guiding principle and explanation of the cases which are reported in detail in the subsequent chapters. Briefly stated, the theory maintains that in functional mental disease the disorder is to be traced to the loss of synthesis and unity in mental life. Certain systems of ideas which become split off or separated from the highest level of consciousness, exist in the form of subconscious experience or personality. These dissociated systems may give rise to many different pathological phenomena, such as anæsthesia and amnesia; they may persist in the subconscious form, or may occasionally take their place as dominant factors in the upper, waking, consciousness. With this explanation the mode of cure is indicated; the whole mental life is to be reassociated and unified, this process being accompanied by the ejection or modification of such factors as are incompatible with normal healthy life. In connexion with the psychological view we may refer to the stages of degeneration of the neurone as classified by Dr. Sidis. First there is disaggregation of whole systems of neurones which have suffered no organic lesion: in the next stage the neurone itself is affected, but is capable of recovery: in the last stage, exemplified in general paralysis, injury is so great that recovery is impossible. In several chapters which follow the introduction, Dr. Sidis gives his views on the general subject of psychopathological research: he insists on the principle of reducing complex problems to simple and accessible forms and lays stress on the study of functional psychosis as preparing the way for a study of more complex problems. It might have been expected that in this general discussion some reference would be made to the work of the German school of psychopathological research.

The patients, whose cases are studied and presented as typical of many others, include a girl who suddenly developed maniacal symptoms, a man who completely lost recollection of recent events owing to an overdose of alcohol, a young woman whose symptoms were those of psychic epilepsy, a man who developed a firmly rooted depressive delusion, a young woman presenting localised motor disturbance, and lastly a man showing ordinary symptoms of epilepsy. In nearly all the cases the chief method pursued is that of analysing the patient's mental condition and elucidating his past history by the ordinary methods of hypnotism, by the method of distraction, and by a method devised by Dr. Sidis, and termed hypnoidisation, which consists in noting the ideas which spontaneously appear in the subject's consciousness while his attention is concentrated on some object. In some cases the patient's sensibility is examined; the unconscious reactions are also registered by the graphic method, the plates at the end of the volume being reproductions of graphic records which have been taken. By these means the authors consider themselves able to give an exact account of the subconscious detached mental systems; this knowledge prepares the way for the application of suggestion in its various modifications to the problem of mental recovery. The authors record that in each of the cases decided success attended their efforts to restore mental equilibrium. It is interesting to notice the successful result in the delusional case, which is analysed with great care, and to compare with this the view of Kraepelin that it is not possible to remove fixed delusions by means of hypnotism. The notes and descriptions of the cases might with advantage have been condensed and more thoroughly arranged.

The practical aspect of these investigations is of interest to the alienist rather than to the psychologist. It would not be fair to criticise the

theoretical side of the work presented by Dr. Sidis and his colleagues, since the full statement of their principles is postponed. Apparently the theory of subconscious mental systems is accepted without reserve; in its applications to the cases presented it bears a close resemblance to Janet's theory of *désagréyation mentale*. Since, however, almost the only mention of former investigations consists in references to previous work of Dr. Sidis, it is rather difficult to understand in what relation the work is supposed to stand to that of other investigators. In general the volume presents a vigorous and interesting attempt to analyse the phenomena of mental disease. The details in the application of the methods show great patience and ingenuity, and even where the general conclusions which are offered seem not to have an adequate basis of fact the mode of interpretation and presentation is suggestive.

W. G. Smith.

The Economic Interpretation of History. By Edwin R. A. Seligman. New York: The Columbia University Press; London: Macmillan & Co., 1902. Pp. ix., 166.

This is in the main a reproduction of some articles that appeared in the *Political Science Quarterly*. The gist of Prof. Seligman's contention is contained in the following passage (pp. 157-8): "Human activity is indeed the activity of sentient beings, and, therefore, the history of mankind is the history of mental development; but human life depends upon the relation between the individual and his environment. In the struggle that has thus far gone on between individuals and groups in their desire to make the best of their environment, the paramount considerations have necessarily been economic in character. The view of history which lays stress on these paramount considerations is what we call the economic interpretation of history. They are not the exclusive considerations, and in particular instances the action and reaction of social forces may give the decisive influence to non-economic factors. Taking man, however, for what he has thus far been and still is, it is difficult to deny that the underlying influence in its broadest aspects has very generally been of this economic character. The economic interpretation of history, in its proper formulation, does not exhaust the possibilities of life and progress; it does not explain all the niceties of human development; but it emphasises the forces which have hitherto been so largely instrumental in the rise and fall, in the prosperity and decadence, in the glory and failure, in the weal and woe of nations and peoples. It is a relative, rather than an absolute, explanation. It is substantially true of the past; it will tend to become less and less true of the future."

In developing his theme, the author displays considerable learning and not a little critical acumen. His judgments are sober and carefully formed; but of course his treatment cannot pretend to be exhaustive. Apart from a somewhat detailed consideration of the great movements of history, general statements on such a subject, when not paradoxical, are apt to be almost truistic. Mr. Seligman has, however, given us a vigorous sketch of an important subject; and we may perhaps hope for a more thorough investigation of it in future.

J. S. M.

Happiness: Essays on the Meaning of Life. By C. Hilty. Translated by F. G. Peabody. London: Macmillan & Co., Limited; New York: The Macmillan Co., 1903. Pp. x., 154.

This little book contains selected essays from the first series of Prof. Hilty's *Das Glück* (1891). The essays themselves are short homilies, admirably written, upon practical ethics, and the translator has been unusually successful in catching the spirit of his originals. The seven chapters are entitled "The Art of Work," "How to Fight the Battles of Life," "The Children of This World are Wiser than the Children of Light," "The Art of Having Time," "Happiness," "The Meaning of Life". The book is well printed, and Prof. Hilty's rather copious footnotes are either omitted or relegated to the end of the volume. Had the translator furnished an index the volume would have met with the reviewer's unqualified approval.

Syllabus of Lectures on the History of Education, with selected Bibliographies. By E. P. Cubberley. New York: The Macmillan Co.; London: Macmillan & Co., Limited, 1902. Vol. i., pp. xii., 1-129; vol. ii., pp. viii., 130-302.

An exceedingly useful book. "The aim has been to give the student breadth of view by familiarising him with the literature of the subject, and to provide some training in methods of independent work. . . . A close connexion has been maintained between the history of the civilisation of a people and the ideas on and progress of education among them. . . . An attempt has also been made to separate what was mere theory from what was actual practice, what was particular or local from what was general." The syllabus is richly supplied with maps and illustrations, and the pages are printed only on one side.

A Discussion of Composition as Applied to Art. By J. V. van Pelt. Illustrated by the Author. New York: The Macmillan Co.; London: Macmillan & Co, Ltd., 1902. Pp. viii., 275.

A book intended partly for students of architecture, partly for the general reader who wishes to know something of architecture as an art. The discussion falls into six parts: the first treats the general laws of character in art; the second, general technical laws; the last four have to do with applications,—two being theoretical discussions of decoration and plan, and two containing practical suggestions in the same subjects. The writer is a graduate of the École des Beaux Arts, and follows in the footsteps of his teachers. Unfortunately, he seems to have thought out his book in French, so that it reads more like a translation than an original composition in English. He has, however, made use of German psychological sources. His confidence in the affective laws laid down in Lehmann's *Hauptgesetze* is, perhaps, overgreat; and when he says that "pure green has no direct complement" he is following Helmholtz a little blindly; no spectral complement is what is meant. On the other hand, the chapter on Optical Effects makes sound and conservative use of recent work upon the geometrical optical illusions.

Études esthétiques. Par George Lechalas. Félix Alcan, 1902.

The essays in this book may each be studied separately, though many of them have a logical connexion with one another. The introduction and

the opening chapter deal with the general problems of the nature of beauty and of art; then follow a series of more special studies, suggested by the difficulties which encounter the artist in the reproduction of nature. Two more isolated chapters on the relations of art to curiosity and to morality close the book.

In the Introduction M. Lechalas concludes, perhaps somewhat summarily, that beauty is to be identified with being. To this conception, as though aware of the difficulties involved in its application, he does not again return, but directs his attention, for the most part, to the concrete and material in æsthetic phenomena. In consequence, perhaps, of his anxiety to avoid a too strictly *a priori* treatment, he has, in several of these essays, decidedly overstepped the limits of æsthetic proper. In the essay on art and nature he is led somewhat astray by a too exclusive consideration of the merely external in nature. The difficulties, the unavoidable limitations to which the artist is subjected in the endeavour to reproduce this aspect of nature, invite a discussion of the general laws which govern artistic reproduction: and here M. Lechalas encroaches still more evidently upon foreign territory. The processes, physical, physiological and psychical, which lie at the base of æsthetic experience, no doubt afford matter for interesting and fruitful investigation; but of the significance of the experience, as a complete, given whole, such investigation can tell us nothing, and therefore the claim of certain of these essays to the title of æsthetic studies is a doubtful one. Apart from this, the problems under discussion, many of them extremely intricate, M. Lechalas has treated with much insight and enthusiasm: his aim being rather to present the general state of scientific opinion in each case than to elaborate any theory of his own. In this he is perhaps wise, as the conclusions drawn must necessarily be very problematic. This method he has also pursued in the essays which fall more strictly within the province of æsthetic. The two most widely accepted theories of the object of art, as emotional content or as beauty of form, are, in the chapter entitled "Qu'est-ce que l'Art," considered, illustrated, and condemned. Those, however, who agree with M. Lechalas in this condemnation will hardly feel satisfied with his own conclusion, which is more a compromise between the other views than a solution of their apparent contradictions. M. Lechalas handles in a broad spirit several of the many aspects which the question of the relation of art to morals presents: he condemns the fiction of *l'art pour l'art*, and while denying the necessity of a definite moral aim in the artist, insists on the fact that art, if rightly used, is a mighty power for good; and that, in consequence, the employment of this force "*saurait être réglé par elle-même et par elle seule*".

In a long chapter devoted to "L'Art et la Curiosité," M. Lechalas seeks to determine the ideal relation between these two principles, which are so antagonistic and yet so inseparable. To "la curiosité," however, a double sense seems to attach, as sometimes it corresponds to our curiosity," sometimes to a less ignoble desire for information. However, both impulses have this in common that they are detrimental to the true æsthetic enjoyment, whether it be that our undue interest in the subject renders us too indifferent to the treatment, or that we are diverted from a proper appreciation of the artist's meaning by the attraction of historical detail. The greatest artists and poets have therefore, as M. Lechalas shows, obeyed a true instinct in making subject and local colour matters of subsidiary importance, although they could not be ignored altogether.

As M. Lechalas relies so largely on the appeal to experience, his wide

acquaintance with the arts stands him in good stead. It is perhaps to be regretted, however, that for the illustration of the various problems he confines himself almost exclusively to one or another of the arts, and does not appeal equally to all: the general validity of his conclusions suffers in consequence. One feels especially that poetry does not receive her due weight as a witness. Another criticism which suggests itself in reading these studies is that the long and frequent quotations are detrimental to the unity and continuity of the argument. However, one must, perhaps, not expect too methodical a treatment in a work whose chief aim is evidently to stimulate and to suggest rather than to convince. And there are few readers who will not find stimulation in one or another of these essays, which embrace so wide a range of problems and variety of opinions.

J. Shawcross.

La Logique Morbide: I. L'Analyse Mentale. Par N. Vaschide and A. Vurpas. Paris: Société d'Editions Scientifiques et Littéraires, 1903. Pp. xxviii., 268. Price 4 fr.

M. Vaschide's attention, we are told in the introduction, was drawn to this subject by his experimental researches on dreams. The present volume is the first of a series which will be devoted to the analysis of pathological logic. It is dedicated to the famous psychologist M. Ribot, who prefaces it with a few pages of commendation. He has indeed misgivings about the title of the work. It might have been better named a "study of pathological reasoning processes"; and we quite agree that from a certain point of view "pour la psychologie, il n'y a pas de raisonnements bons ou mauvais, mais des procédés discursifs de l'esprit qu'elle doit étudier". Ribot and Vaschide think, however, that it would be mere hair-splitting to mark out the scope of such descriptive analysis of processes by which conviction is actually reached—to define the relations between this and normative logic. The hair, of whose existence M. Ribot seems rather uncomfortably conscious, proves really upon inspection to be as thick and many-stranded as a trans-Atlantic cable. We note the omission, and call the attention of the analytical psychologist to the problem.

The authors have described four cases in which mental analysis, a continual pondering of somatic sensations, or of abstract ideas, or of external events, has resulted in the production of different kinds of delirium. The first case is one of so-called *délire de négation;* the second one of *délire du scrupule.* The third case, the description of which is all the more valuable for being founded upon a lengthy communication written by the patient herself, is called by the authors 'Extrospection délirante'. The fourth is less detailed and decidedly less interesting than the other three. It is a case of "metaphysical delirium". It is a record of the incoherent speculations of a degenerate about the sun, the fixed stars, and other astronomical facts of which he knew little, understood less, and could hardly be said to reason about. Nor do the authors claim that there was even the appearance of cogency in the processes by which he reached his conclusions. The interest of the other cases, on the other hand, first consists in the fact that, owing to a habit of morbid self-analysis, certain elements in the patients' cœnesthesia, or in their general external experience, were singled out, intensified, exaggerated, and distorted. These experiences provided the premisses for conclusions which were reached by processes of argument acknowledged by the physicians to wear no slight appearance of cogency. In the case of *Charlotte R.* who fancied

her flesh and bones had turned into iron, and in that of *Renée Marie* who fancied she had for years been secretly married to a certain gentleman of her acquaintance, the conclusions were false because the premisses were so wide of the truth. The really interesting question is how the false premisses were elaborated. The authors' explanations are not precisely clear; and they are couched in the queerest possible French. But by the exercise of a good deal of patience, and some ingenuity, the reader will be able to construct for himself out of the facts scattered through chapters ii. and iv. some idea of the genesis of two curious kinds of delirium.

F. N. H.

Ausgewählte Beiträge zur Kinderpsychologie und Pädagogik. Von Dr. G. Stanley Hall. Translated into German, with an Introduction and Notes, by Dr. Joseph Stimpfl.

It is noteworthy that the articles on "Child-Study" by Dr. Stanley Hall, which have, from time to time, appeared in American periodicals, have been first collected in a German edition. No country has been so much influenced by German pedagogy as the United States, and, as Rektor Ufer, the general editor of the series, points out, this influence is a reciprocal one.

Thirteen articles are collected in this volume; six of them are on the general question of Child-Study and its relation to education, whilst others are detailed investigations of particular psychoses.

The first article by Dr. Stanley Hall on Child-Study and its relation to education deals with the criticisms of which the following are typical. He has little difficulty in rebutting appeals to popular sentiment such as those of Prof. Münsterberg when declaring that his own children should never be mentally vivisected; that they should be loved, not studied; and he points out that the precocious self-consciousness, which children under observation are supposed to develop, is a bogey of the imagination. Moreover, it may very well be contended that the independence of theory, which the statistical investigations in Child-Study are supposed to exhibit, is more apparent than real. Of course there are collections of relatively little value, but, speaking generally, the framing of the questions to which answers are required is a matter involving a very considerable grasp of psychological theory and some prevision of the results. A more cogent objection is the little value that matter collected by untrained observers is likely to possess. In an investigation on the development of Colour Names in very young children I was much impressed by the lack of knowledge shown even among the best teachers. But, as Dr. Stanley Hall points out, much depends on the kind of question which is asked, and much depends on the way in which the teachers are told to obtain answers. There will be errors undoubtedly, and many of them. There are errors, too, in the most brass-instrumental psychology, and the information collected, if not duly rounded and fitted into theoretical compartments, has still a suggestive value even for the psychologist of the laboratory. Moreover, there is a stimulating effect which the teacher may derive even from relatively unimportant observations made in answer to relatively inexact questions. But Dr. S. Hall tends to press the claims of child-study upon the teacher with rather exaggerated force. The teacher's attitude is, necessarily, other than that of the pure scientist, and the endeavour to submerge his function beneath that of the investigator is, for obvious practical reasons, inadmissible. It is not due, at least nowadays, to the *a priori* and scholastic ways of psychologists that

we have no philosophy of education, nor can philosophy and ethics be merely conversant with a progressive developmentalism. There is, too, in Dr. Hall's work what might fitly be described as the psychological bias in education. The primitive child mind is not to be exalted into supremacy because we happen to be greatly interested in it. The teacher's absorption in this study is apt to make him neglect the normative moral sciences, which are the guides for his aims if not, in all cases, for his methods. Psychology should show how, along the lines of least resistance, to substitute the new for the old, the mature for the undeveloped, and should not induce a sentimental satisfaction with what is crude and infantile.

But, even if all this be admitted, there still remains a vast field for inquiry of a highly useful nature in the investigation, with age and environment fully allowed for, into the actual content of children's minds; and one of the most valuable articles deals with the concepts which children possess on entering school. Even here, however, there is a pedagogical danger, for the ignorance which is so startlingly shown in such statistical returns is apt to throw undue emphasis on the mere collection of perceptive material rather than the thoughtful elaboration of it. A few summarised results are worth noting. Questioning children collectively we find produces results of little value. "The better off the parents, the stiller and less imitative the child." I commend this statement to the ultra-Froebellians, whose insistence on self-activity often degenerates into the notion that unrestrained physical movement is a requisite to the mental education of the young. Colour names are developed, it is said, in the order black, white, red, green, blue, yellow. This is not the order of colour-development in primitive peoples, as Dr. Rivers's researches have shown: nor is it the order of development of colour names in London school-infants, where blue precedes green, so far as my own investigations indicate.

"Boys seem more likely than girls to be ignorant of common things about them." Primary school teachers in Germany, we are told, spend much time in talking of objects and drawing them; talking of objects there is much of, but I have seen no case in which drawing was used in connexion with object lessons, though it is sometimes done in England. To those who say nowadays that to learn the names of letters is unnecessary for introducing young children to the art of reading, I commend the following: "A child may be said to know almost nothing, at least for school purposes, if he has no generally recognised name" for objects.

"Figures, or number signs, almost create arithmetic." This is interesting as a blow at the over-concretion which primary schools have recently suffered from.

Coloured sounds are numerous among children, the author says, but tries to explain it by association or analogy. Probably, however, dissociation of an original *unity* — perhaps *confusion* is a better word—is more likely to explain the subsequent separation of sense data than is the union, at this stage, to be explained by the association of originally distinct sensations.

The ideas of wrong in children are much more distinct than those of right is a summary on the section on Moral Ideas in the young. All these points are both valuable to the teacher and suggestive to the psychologist.

In the "Story of a Sand-heap," the fifth article in the collection, we have what is described as a pedagogical idyll.

A number of boys on successive holidays convert a sand-heap into a miniature village with fields, houses, horses, cows, poultry. Prominent

among the benefits of this playful construction were, according to Dr. Hall, the industrial training in Woodwork which was involved, and the valuable civic training which arose out of the discussion amongst the boys of various problems of government. It is interesting to find that, like children of a larger growth, they inflated their currency to meet difficulties, that "prices were affected, and that a few sales were made at prices so high as to cause embarrassment later". Railroads were proposed, but never constructed, one reason being that they would interfere with teaming. The "theory of an annual year of jubilee and a release from last year's debts" was only upheld by the poorer boys and was not adopted. Speaking generally, the author thinks that this is education according to Nature in its best form, and that here we have "perfect mental sanity and unity; but with more variety than in the most heterogeneous and soul-disintegrating school curriculum". All this is interesting, but is not its value somewhat overrated? An opportunity is given to some boys (the little girls, we read, were most destructive) to work out some of their primitive conceptions of society in plastic material and they avail themselves of it. But I do not believe thereby that educational problems receive easy solution, though I am quite prepared to admit that the study of such natural experiments may be of much service to pedagogy in enabling it to get a real grip of the spontaneous working of young minds.

W. H. Winch.

Kunst und Moral: eine ästhetische Untersuchung. Von Dr. Emil Reich, Privat docent an der Universität Wien. Wien, 1901. Manz'sche k.u.k. Hof-Verlags- u. Universitäts-Buchhandlung.

The writer guards anxiously against the anticipation that his book will contain a theory of the relationship of art to morals. Not theories, as he repeatedly warns us, but facts are his aim. We seek in vain to control the artist's practice by decree or dogma: the important thing is to know what this practice is and does, the influence which art actually exercises as a factor in life.

The book is, somewhat roughly, divided into three parts. In a short introduction Dr. Reich points out how the fallacious tendency to reduce all phenomena to a single principle has been detrimental to a right understanding of the problem in question. Instead of regarding either of these functions (the artistic and ethical) as merely a form of the other, we must conceive the relation between them as one of reciprocal action. We shall then see that neither the moral, nor the artistic value of any object provides the highest standard of estimation, but that both must be subordinated to its general value for human life. Equally fallacious is a complete divorcing of the two functions: the dogma of *l'art pour l'art* can only be maintained by an æsthetic of form, to which the nature of the content is a matter of perfect indifference.

Before pursuing further this point of view, Dr. Reich passes to an historical development of the problem. One cannot but feel somewhat surprised, seeing how averse Dr. Reich is to theorising himself, that he should devote more than half of his book to the theories of others. As the actual practice of art is the theme of main interest for him, we should rather have expected this to be the subject of his historical survey. At least one cannot help regretting the decision which led him to omit the more popular writers, save such as are less well known, and to confine himself to 'Fachphilosophen'. For if speculations about art have any vital influence either on artist or public, this influence is surely greater

in writings which make the widest appeal. Apart from this, Dr. Reich has given a clear and interesting sketch—a difficult task, where so much compression was necessary—of the gradual emancipation of art from morality: or rather of her progress "from slavery through freedom to voluntary service". In reaction against the undue pretensions of morality there grew a tendency to disclaim all connexion, which has in its turn given way to the more scientific and impartial recognition of an essential affinity. To illustrate this movement, Dr. Reich quotes a wide variety of opinion, drawn from the æsthetic of Germany, France, England and Italy. To the fact that Dr. Reich is writing for a German public, we owe an appreciative treatment of Ruskin.

In the third, the critical part of the book, Dr. Reich develops the line of thought indicated in the introduction. While still careful to avoid dogmatising, he does not conceal from us in what direction his sympathies lie: with those, namely, for whom, to quote his own words, "the most important matter is not to enjoy specific emotions, but to preserve the welfare of their souls". Art, whatever we hold its sphere or mission to be, does in fact exercise a most vital influence on our character and sentiments. The artist aims at communicating his own impressions, beliefs, and aspirations, in fine his view of life; and his work, if it influence at all, cannot fail to influence through its content as well as its form. The young, especially, turn to art with a definite desire to learn something of life. Hence the artist is forced to be a teacher whether he will or not: for "die Kunst muss wirken". He cannot therefore afford to cultivate his art without a purpose, or with no purpose save a perfection of form to which the content is indifferent. In the work of all great artists, the existence of wider and often extra-æsthetic aims is evident. So too, the public in enjoying, the critic in estimating, art is justified in regarding the content as of primary importance, although this may involve a sacrifice of the purely artistic attitude. For, to quote again, "the artistic value of a work of art is not affected by its possible moral condemnation, but its value for life *is*"—a conclusion with which all must, in part at least, agree. We may indeed take exception to the first statement, and reply that artistic approval, if it be honest, rests on artistic enjoyment, and that this demands the assent of our whole nature, and cannot therefore be compatible with moral disapprobation. But Dr. Reich's final statement is surely convincing: 'value for life' means moral value, even if it means something more; and it is this 'Lebenswert' with which we are finally concerned, and which alone secures permanence for any human production. For nothing can live itself, which does not help the life of the world. But it is as human productions that works of art are in the last issue to be judged and estimated.

Dr. Reich informs us that his book nearly coincides in its subject-matter with his lectures on the relation of art to morality. Perhaps this accounts for a certain desultoriness of treatment, which suggests the spoken rather than the written word; and which, though attractive in itself, makes it at times difficult to follow his line of thought. Especially the critical part of the work, which is the most valuable, would repay a more systematic, possibly also a more expansive, treatment. The earnest and impartial spirit in which the book is written, will recommend it to all whom the problem interests—whether their interest be chiefly speculative or practical.

J. Shawcross.

Von Fühlen Wollen und Denker—Eine Psychologische Skizze. THEODOR LIPPS. [Heft 13 and 14 of the *Schriften der Gesellschaft für Psychologische Forschung*, Sammlung 3.] Leipzig: J. A. Barth, 1902. Pp. viii., 196.

Einheiten und Relationem—Eine Skizze zur Psychologie der Apperzeption. THEODOR LIPPS. Leipzig: J. A. Barth, 1902. Pp. iv., 106.

Prof. Lipps is in a way the despair of the reviewer, particularly of the reviewer whose space is sternly limited by editorial command. This is partly because of the extraordinary amount of psychological material which he contrives to compress into so small a space, but partly, alas! also because of his own somewhat perverse love of elaborate classifications and subdivisions which it fairly passes the wit of man—of one man at any rate—to retain in the memory for ten pages together. It is quite impossible to give anything like a conspectus in brief compass of the argument of his two pamphlets—of which the second is a sort of semi-independent appendix to the first; but both, especially the first, must be heartily commended to all readers who care for subtle psychological analysis and are willing to weary the recalcitrant flesh in the pursuit of it. The former and longer monograph, modestly described as a "sketch," leaves hardly any problem of the effective and conative side of mental life untouched. The author's general point of view may be gathered from his definition of feelings as "the immediate symptoms in consciousness of the ways in which psychical processes are related to the soul or complex of mental life". It follows of course from such a definition that the varieties of feeling must be infinitely numerous, and the main object of the work is to reduce this infinite manifold to some sort of order by means of a system of classification too complex to be briefly described, but ultimately depending upon a threefold subdivision of all feelings into (1) perceptive and apperceptive; (2) object-feelings and perception- (or apperception-) feelings; (3) feelings of freedom and of constraint (*gebundenheit*). Particularly suggestive is the discussion of wish and will (ch. vi.), of feelings of value (ch. vii.), and of "obligation" (ch. ix.).

The main thesis of the second and briefer sketch are that all relations are psychologically either relations between an apperceptive subject and the object or relations between objects "established by my apperception," and similarly that every form of "unity" is ultimately the creation of the subject's act of "apperception". "The concepts which govern all our thinking . . . are not taken from perception or sensation, but are modes of apperceptively uniting a manifold, which are founded on the nature of mind". Thus Prof. Lipps comes, as he says, to the Kantian position, and like Kant exposes himself to the serious question—"is the antithesis between 'taken from perception' and 'founded on the nature of mind' ultimately sound?"

A. E. T.

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X.—PHILOSOPHICAL PERIODICALS.

Philosophical Review. Vol. xi., No. 5. **M. F. Washburn.** 'Psychological Analysis in System-Making.' [An examination of certain systematic works of Wundt, Ebbinghaus and Münsterberg, to determine (1) how they define the mental element, (2) upon what basis (if at all) they make the division between classes of elements, (3) how they define attribute, and (4) how they classify attributes. The differences in the three systems "are due to different conceptions of the nature of analysis, to different views about the relation of an attribute to that on which it depends, and to different conceptions of the relation between epistemology and psychology and the former's right to influence" a psychology. The first two points are mere matters of definition, and agreement upon them would constitute an important advance in psychological method.] **F. C. French.** 'The Philosophy of Religion: Its Aim and Scope.' [There are three main methods whereby philosophy has dealt with the religious problem. (1) The method of elimination (Xenophanes and Plato, the natural theology of the eighteenth century, Comte and Spencer) "proposes to rationalise religion by striking out all that is false in theory and pernicious in practice, thus leaving only what is good and true". (2) That of addition (Scholasticism) accepts the dogmas of a given religion as unquestionably true; it seeks to furnish a rational basis for religion as it finds it. (3) The method of 'philosophy of religion,' a nineteenth century growth, takes religion "as a fact in human life to be interpreted"; the positive religions are "steps in the historical development of the religious consciousness". To determine the aim and scope of this 'philosophy of religion,' we must consider the natural relations of religion and philosophy. (*a*) Intellectually, philosophy itself, to be complete, must contain an interpretation of religion as at any rate one of the important factors in human life. (*b*) Practically, religion for its own sake needs a philosophical interpretation.] **H. H. Bawden.** 'The Functional View of the Relation between the Psychical and the Physical.' [Explanations of the relation of mind to body are either ontological or teleological. The former are either theories of causality (interactionism, materialism, spiritualism), or theories of parallelism (pre-established harmony, agnosticism). The latter "regard the psychical and physical as functional distinctions within the one concrete knowable reality of experience". "What was at first a purely practical distinction was gradually transformed into an ontological distinction. . . . The solution of the problem lies in getting back to the principle involved in the practical attitude, though now . . . in a reflective, conscious way." We begin with immediate experience. Within this emerges the distinction of means (the physical world) and ends or values to be realised (psychical). Experience is thus psychical only at critical or nodal points. The distinction in question is purely

methodological.] **W. H. Sheldon.** 'The Concept of the Negative.' [We have two questions: What positive, definite information is implied in a negative judgment? and: Is the negative objective and factual, or merely subjective? The usual logical answer to the second question is that the negative is indefinite (Lotze) and empty (Bradley); therefore it cannot be factual. But, in examining the first question, we find that "there is a tendency, as knowledge advances, for negative judgments to equal positive ones as regards the information conveyed. If the field within which knowledge works has been narrowed until two alternatives only remain, . . . the negation gives positive information; thus its indefiniteness is removed." But, again, this position revives the second question: if definite, why not (in special cases) factual? Indeed, the negative judgment always implies some positive knowledge, on which it is based; it is always a comparison, a relating between a given and a not-given. Hence there is nothing, in the nature of things, to prevent a negation—a negative comparison—from being objectively valid. A negative conceptual entity (1) may be defined, and must be defined negatively, because no perception is brought in; (2) has no logical impossibility about it; and (3) is factually useful, in order to an intelligible description or explanation of a certain property of space.] Reviews of Books. Summaries of Articles. Notices of New Books. Notes. **M. W. Calkins.** 'The Psychology of Mental Arrangement.' [Critique of Bentley's paper in *American Journal of Psychology*, xii.] Vol. xi., No. 6. **A. Lefevre.** 'Epistemology and Ethical Method.' [The scientific or empirical method in ethics implies an epistemology. It implies "that our primary experiences somehow bring us face to face with reality, and that all further elaboration on the part of thought means the addition of mental predicates and the erection of an ideal system for which we have no guarantee of real validity". Its premisses "predefine the nature of a *fact*, preclude from the realm of fact many of the elements that go to make up the complex structure of human knowledge, and predetermine the source of validity and truth". If we set out for a better epistemology, and hold that knowing is all of a piece, we lose the distinction of 'speculative' and 'real'; we find that the interpreting activity of consciousness is the precondition of experience at large; we get our test, not in primitive 'pure experience,' but in "a higher judgment of the coherence of our system of knowledge". The genetic method is of value to ethics only as describing the way in which a conscious self asserts its personal identity as the underlying unity of its transient experiences.] **J. A. Leighton.** 'The Study of Individuality.' ["The principle of individuation is an immediate state of feeling, which at once constitutes a permanent unity of life and holds a developing and differentiating content of consciousness." "The inner principle of individuality is not to be understood by any process of syllogism or formal inductive inference, but only by the exercise of a sympathetic imagination, by an intuitive apprehension akin to that involved in the appreciation of a work of art." This thesis has important bearings for logic and epistemology, for ethics and pedagogics, even for metaphysics. "To know the Absolute, is to appreciate the innermost nature of the individual life, and the various types of human individuality, from the side of their meanings and implications as elements in the organised system of reality."] **R. B. Perry.** 'Poetry and Philosophy.' [Characterisation of non-philosophical (Whitman, Shakespeare) and of philosophical poets (Omar Khayyam, Wordsworth, Dante). "The philosopher-poet is he who visualises a fundamental interpretation of the world. . . . The philosopher proper has the sterner and less

inviting task of rendering such an interpretation articulate to thought. That which the poet sees, the philosopher must define": *cf.* the relation between Goethe and Spinoza.] **K. Gordon.** 'Spencer's Theory of Ethics in Its Evolutionary Aspect.' [In all the four views (physical, psychological, biological, sociological) under which Spencer formulates his ethical doctrine, "the end of moral action is for him a fixed end, a goal, a static goal. The Good is variously expressed as the equilibrium of forces, as the balance of functions, as habit completed and pleasure attained, and as society perfected." A consistently evolutionary theory would insist that there is no last limit or final goal of evolution; that critical moments and unsettled problems are the very condition of conscious life and moral action. In Spencer's exposition, evolution is merely incidental, an historical accident.] Discussion. **H. Barker** and **E. Albee.** 'A Recent Criticism of Sidgwick's *Methods of Ethics*.' [Criticism of Albee's position in his *History of English Utilitarianism*, and reply.] Reviews of Books. Summaries of Articles. Notices of New Books. Notes.

Psychological Review. Vol. ix., No. 5. **G. M. Stratton.** 'Studies from the Psychological Laboratory of the University of California.' III. **G. M. Stratton.** 'Visible Motion and the Space Threshold.' ["The doctrine that visual motion is a primitive form of sensibility independent of local discrimination finds no experimental warrant. The perception of motion seems to be . . . the perception that a sensation is changing its space relations, the motion itself furnishing a decidedly favourable, but by no means unique, set of conditions for appreciating such differences of space relationship." The discrimination is often immediate; but even so the apparently simple 'psychic stroke' is really a complex act.] IV. **G. M. Stratton.** 'The Method of Serial Groups.' [An attempt to legitimate the blank experiment, to introduce it as a continuous and regular element of the procedure, in the method of minimal changes.] V. **M. L. Nelson.** 'The Effect of Subdivisions on the Visual Estimate of Time.' [In intervals between three and sixty seconds, there is a "temporal illusion very similar to the space illusion of sight". The filled 'stretch' is overestimated. A single division, however, does not, as Meumann found it did, shorten the temporal estimate. As the standard interval is increased, the illusion decreases, till it is finally lost.] **R. Macdougall.** 'The Relation of Auditory Rhythm to Nervous Discharge.' [The elementary condition of the phenomenon of rhythm is threefold: the periodic accentuation (not necessarily connected with any specific type of objective change) of an auditory succession (*i.e.*, a repetition of functionally integrated groups) under specific temporal relations (a narrowly limited range of rates). It is given with "the laws of periodicity of functioning in the bodily organism". The mechanism involved is twofold: "a periodical facilitation and inhibition of nervous activity," arising from the relation between the periodicity of its own rhythm of functioning and certain intervals in the objective series of stimulations, and "a motor accompaniment in the form of sensation reflexes occurring in some part of the bodily organism". The rhythm activity represents a relatively undifferentiated type of reaction. "Its appearance as a spontaneous exercise and as a reflex accompaniment is a manifestation of the primitive tendency to reaction towards presented objects, and of an equally primitive tendency to perpetuate a movement once made." It belongs to the activities of early ages of development, and of the lower parts of the nervous system: *cf.*, the persistent and exaggerated types of rhythmical motor activity shown in certain abnormal conditions. Hence dominant and effective rhythm can exist only in simple musical and poetic compositions; in the 'higher' kinds, secondary factors, more

complicated co-ordinations—not new rhythms of more synthetic type—are the basis of appreciation. The constitution of objective rhythmical forms and the laws of their synthesis are to be sought in the relation of the successive sounds of the rhythmical sequence to a co-ordinated system of motor impulses.] Discussion and Reports. **E. B. Titchener.** 'The Relations of Feeling and Attention.' [Critical note upon the results of Zoneff and Meumann. *Philosophische Studien*, xviii.] **K. Gordon.** 'On McDougall's Observations Regarding Light and Colour Vision.' [McDougall's conclusions are often premature, sometimes logically surprising. The Hering, Müller, Franklin theories are in the line of progress; McDougall's is a step backward. Especially questionable is his explanation of the sensation black.] **E. F. Buchner.** 'Some Characteristics of the Genetic Method.' [The genetic method (1) "presupposes the work of analysis as being more or less completed," and selects from analytical results such lowest forms of conscious action as feeling, instinct, automatic processes. It thus has a special material and a special field. It combines induction and deduction, the 'thing' and the 'process' views of mind. The method (2) leads to a psychology which is very different from stimulus psychology, and tends to do away with brain psychology: a psychology in which method and content are identified. (3) It removes the old-time dispute about psychical causation, and seeks to fill the void left by that removal. (4) It is not, as is sometimes said, the 'final and the highest method of psychology'; but it is the right way of attacking one of the veritable problems of mind. (5) It makes characteristic assumptions: of racial consciousness, of psychological heredity, etc.] Psychlogical Literature. New Books. Notes.

American Journal of Psychology. Vol. xiii., No. 3. **S. Bell.** 'A Preliminary Study of the Emotion of Love between the Sexes.' [Portion of a comprehensive study of the normal psychology of sex; account, with typical cases from questionary returns, of the first two stages in the genesis of sexual emotion. (1) Children of three to eight years of age. "The presence of the emotion is shown by . . . hugging, kissing, lifting each other, scuffling, sitting close to each other; confessions to each other and to others, talking about each other when apart; seeking each other and excluding others, grief at being separated; giving of gifts, . . . making sacrifices, . . . jealousies, etc." Discussion of the primacy of touch in sexual emotion. (2) Girls, eighth to twelfth; boys, eighth to fourteenth year. "Shyness, modesty, especially in girls, self-consciousness and consequent efforts towards self-repression; inhibition of the spontaneous, impulsive love-demonstrations" of Stage (1). "Conspicuous absence of pairing; . . . mutual confessions are seldom made." "The impulse to conceal the emotion . . . is fundamental." Significance of games in which both sexes are engaged; influences of teasing, showing off, etc.] **E. F. Buchner.** 'Fixed Visualisation: Three New Forms.' [Full description of a number, day and month form. The biographical data throw no light on the genesis of the forms, and the writer makes no attempt to explain them.] **C. J. France.** 'The Gambling Impulse.' [A study of gambling, historical and critical, the latter based upon questionary returns. (1) In face of chance and risk, two opposite feelings arise: fear and faith. In gambling, the 'faith-type' of man is selected. Belief in immunity from harm, in ultimate success, "this feeling of certitude is the great biological organ which functions to suppress the idea of chance and to minimise the respect for the danger in risk". (2) Man has evolved in an environment of uncertain content. "The need of tension, together with the feeling of faith in one's safety, is perhaps one of the most effective of all agents reacting against the great psychic

tendency towards fixity." (3) The emotional intensity of gambling is further due to the presence of many of the strongest egoistic instinctive feelings. The key to the psychology of excess, to the tendency to seek intensive emotional situations, may be "the attempt, through natural selection, to put oneself on a higher metabolic level". (4) Man easily lapses from intellectual effort and sustained active attention. Gambling is seductive as offering the rewards of work without our working. (5) Regarded as play, gambling is of great sociological and ethical importance. "In play, for a long time at least, the race would revive its psychic past, having created the stimuli prevalent in its primitive environment." The 'psychic centres' may seem to become rudimentary, and yet go on in active function, as play centres. "Play would thus be an index to the history of the psychic life." (6) Gambling, as all similar instinct-activities, cannot be stamped out, but should be channelised into harmless courses.] **R. R. Gurley.** 'The Habits of Fishes.' [Deals principally with the native American Salmonids. (1) The significant fact in the temperature-relations of fishes is the distribution of spawning with reference to the signs of the temperature-zodiac; (2) the immediate stimulus to spawning is the definite temperature trend in one direction; (3) structurally similar forms tend strongly to sustain in their spawning similar relations to the temperature-curve (certain apparent exceptions can be harmonised with this law); (4) for a given species the temperature-relations which determine its migration and probably also its geographical distribution are the same as those that determine its spawning; (5) these facts demonstrate the presence of a nervous mechanism that is responsive to temperature; (6) this mechanism is a character of prime importance, and is entitled to at least super-family rank; (7) its existence explains why with spawning in cooling water is, and must be, associated migration to cooler water with boreal distribution; and with spawning in warming water, migration to warmer water with austral distribution; (8) by a working backwards from the time of most successful hatching, the time of spawning has been determined by way of natural selection; (9) the spawning time being thus fixed, natural selection, by a further working backward, has determined the time of precedent migration.] **E. C. Sanford.** 'Mental Growth and Decay.' ["A psychologist's sketch of mental development, from the first beginnings of mind at or before birth to the final failure and break-down of the powers in old age." Brief descriptions of the seven ages of man: babyhood, childhood, youth, young manhood, middle age, the period of the elderly, senescence: in the light of two general laws of growth—Minot's law, that "the time required to accomplish a change of a given extent increases with the age of the organism" (with Fiske's corollary of long infancy and high ultimate development), and Wundt's law that "the later stage arises solely from the preceding stage, and yet appears to be a new creation in comparison with it".] Literature. Notes.

International Journal of Ethics. Vol. xiii., No. 2. **L. C. Stewardson.** 'The Moral Aspects of the Referendum.' [A study of the moral and political effects of the institution as exhibited in Switzerland and the United States.] **J. E. McTaggart.** 'Some Considerations Relating to Human Immortality.' [My self cannot be regarded as an activity of my body, since matter has no existence apart from mind. My present body is not an essential condition of the existence of my self. The fact that material objects are transitory raises no presumption that the self is also transitory, since its character is disparate.] **M. E. Robinson.** 'Marriage as an Economic Institution.' [An argument in favour of an

economic as opposed to a sentimental view of marriage, with suggestions for establishing a system of giving women a training for marriage.] **J. W. Howerth.** 'What is Religion?' [A criticism of various inadequate definitions leading to the conclusion that 'religion is the effective desire to be in right relations to the power manifesting itself in the universe'.] **H. Sturt.** 'Happiness.' [An analysis of the conception of happiness leading to the result that it is to be distinguished from pleasure and can be neither the end nor the criterion of conduct.] **J. B. Pratt.** 'The Ethics of St. Augustine.' [Exposition and criticism.] Book Reviews.

Zeitschrift für Psychologie und Physiologie der Sinnesorgane. **H. Ebbinghaus.** 'Register zu den Bänden 1-25.' [Contains index of names (contributors and authors reviewed), list of reviewers, general subject index, and index of division headings.] Bd. xxix., Heft 4 und 5. **M. Schaternikoff.** 'Ueber den Einfluss der Adaptation auf die Erscheinung des Flimmerns.' [Under the conditions of twilight vision (*i.e.*, with very faint lights), the fusion frequencies increase with enhancement of the perceived brightness, whether this enhancement be effected by increase of the light intensity or by progressive adaptation to dark. On the other hand, with intensive lights the fusion frequency lessens as adaptation to dark increases: this result holds for white as for coloured light. The former result might have been expected; the latter is explicable only if we assume two mechanisms in the visual apparatus (rod theory), and ascribe a greater inertia to the rods than to the cones.] **M. Schaternikoff.** 'Neue Bestimmungen über die Vertheilung der Dämmerungswerthe im Dispersionsspectrum des Gas- und des Sonnenlichts.' [Redetermination, by improved methods, of the distribution of brightness in a colourless spectrum (as seen with weak absolute intensity of light and complete adaptation to dark). The maximum lies at 537·2 $\mu\mu$ for the gas spectrum, and at 529·3 $\mu\mu$ for the spectra of blue sky and direct sunlight.] **V. Benussi.** 'Ueber den Einfluss der Farbe auf die Grösse der Zöllnerschen Täuschung.' [First part of an extended experimental study: summary is given below.] **E. Storch.** 'Ueber die Wahrnehmung musikalischer Tonverhältnisse: Antwort an Dr. A. Samojloff.' [Brief recapitulation and defence of the author's theory, given in vol. xxvii., 361 ff.] **K. Groos.** 'Experimentelle Beiträge zur Psychologie des Erkennens.—II. Die Anregung von Fragen bei Schülern.' [Account of experiments by Grünewald, in many respects parallel to those described by the author in vol. xxv., 145 ff. (1) Distribution of the most important logical relations in the questions asked: the causal (and teleological) and the substantial (and attributive) relations head the list, as before. (2) Within the causal relation, regress (from effect to cause) has the preponderance; the interest in progress (cause to effect) increases, however, with increasing intellectual development. (3) The distinction between empty questions and questions of conjecture (questions with a germ of judgment); reply to Meinong's criticism in his Ueber Annahmen; acceptance of Meinong's Entscheidungsfrage for Vermuthungsfrage. (4) The proportion of questions of the second kind increases with advancing age, and within a given class is greater for the clever than for the dull scholars. Sketch of the general psychological procedure in active search for truth (in the putting of an Entscheidungsfrage): this brings out the difference between logic and psychology, for the form of inference which is usually followed, and which is perhaps practically the most useful, is logically incorrect. Educational importance of studies like the present.] Literaturbericht. Heft 6. **V. Benussi.** 'Ueber den Einfluss der Farbe auf die Grösse der Zöllnerschen Täuschung: Schluss.' [Conclusion of this elaborate investigation, of which we can here quote only the results.

I. Ordinary binocular vision. (1) The illusion with a monochromatic figure of uniform brightness is greater, the greater the brightness difference between background colour and figure colour. The decrease of the illusion with decrease of the brightness difference extends, however, only to a certain point, beyond which it increases. With a bichromatic figure of different brightness, the illusion is greater the greater the given brightness difference between transverse line and ground, and the less the brightness difference between principal line and ground. If the former is constantly decreased, the latter increased, the magnitude of the illusion approximates constantly to zero. (2) Over and above the misplacement value (Ablenkungsvalenz) due to the brightness difference of figure and ground (transverse line and ground, principal line and ground), there is also a chromatic misplacement value in the narrower sense, primarily for green and violet. (3) The illusion decreases as the field of observation decreases. The influence of eye movement along the principal line is, with monochromatic figures of equal brightness, indirectly to decrease the illusion; with bichromatic figures of different brightness, to increase or decrease it, according to special conditions. (4) As regards the maximal values of the illusion with the two classes of figures, the observers fell into three well-marked groups. II. Haploscopic observation. (1) With monochromatic figures of equal brightness, haploscopic combination of the parts reduces the illusion. The illusion is still a function of the brightness difference of figure and ground. A chromatic misplacement value is again recognisable. (2) With bichromatic figures of different brightness, the colour difference of transverse and principal lines reduces the illusion, even where other factors would lead us to expect its increase. A distinction must be made between the misplacement value of colour and the misplacement value of insistency (Aufdringlichkeit), the former being realised only in monochromatic, the latter only in bichromatic figures. Colours that have no misplacement value, as colours, possess a misplacement value of insistency and conversely. A theoretical discussion of these facts is promised.] **O. Rosenbach.** 'Zur Lehre von den Urtheilstäuschungen.' [If figures (triangles, ovals, oblongs, angle-pieces, etc.) have their centres covered by a horizontal strip of paper (black, white, coloured), the covering appears, under certain conditions of observation, to be transparent; so that the central parts are seen as if through a veil. Since irradiation and after-images are ruled out, the author ascribes this phenomenon to a pure illusion of judgment. As, however, the supplied central parts are always outlined in accordance with the law of least resistance of eye movement (rounded, etc.), the influence of the sense organ must be admitted. The writer accordingly distinguishes three causes of illusions of judgment: inductive and deductive autosuggestion, and the effect of the physiological automatism of the organ of sense.] Literaturbericht. Bd. xxx., Heft 1 und 2. **E. Riemann.** 'Die Scheinbare Vergrösserung der Sonne und des Mondes am Horizont.—1. Geschichte des Problems.' [Historical sketch of explanations, from Aristotle to von Zehender, Zoth and Schaeberle.] **P. Ranschburg.** 'Ueber Hemmung gleichzeitiger Reizwirkungen. Experimenteller Beitrag zur Lehre von den Bedingungen der Aufmerksamkeit.' [Experiments with the author's mnemometer (stimuli: series of printed numerals) gave the following results: (1) Two to four place numbers are simultaneously apprehended and correctly repeated, with an exposure of one-third of a second, both by educated and (in the great majority of cases) by uneducated observers. (2) Five and six place numbers require a much more intensive concentration of attention; errors and subjective uncertainty appear, even with practised and educated observers. (3) The

error of apprehension, with six place numbers, extends to one or two figures (hardly ever to three or four): the two are almost always juxtaposed. (4) One place errors occur in 90 per cent. of all experiments in the right half of the printed numeral: in two-thirds of these cases the penultimate number is wrongly read, in almost one-third the antepenultimate. Two place errors also occur on the right of the numeral, affecting generally the fourth and fifth digits. (5) One place errors may be referred to the following conditions: assimilation to similar reproductive elements; replacement of an obscurely perceived digit by a clearly perceived similar neighbouring digit; replacement of an obscurely perceived digit by a neighbouring digit, without regard to similarity; replacement of an obscurely perceived digit by some individually preferred number. Two place errors are in general permutations (Finzi) or inversions (Wundt, Zeitler). Similarity illusions also play their part. (6) The experiments showed that certain combinations of digits predisposed to illusion, while others were practically immune. Errors occurred predominantly in numbers whose four right-hand digits contained two identical or similar figures in juxtaposition, or separated by one or two other figures. So we have two sets of conditions for illusion: the composition of the series of digits (homogeneous figures make for errors), and the natural attitude of attention (directed to the beginning of the series).—The rest of the paper is devoted to an examination of this result, that the limen of apprehension of simultaneous (or quickly successive) heterogeneous stimuli lies lower than that for homogeneous stimuli. It turns out that "similar elements, in proportion to the degree of their identity, inhibit the complete and autonomous development of the corresponding stimulus effects". The nature of the inhibitory process is illustrated by appeal to the introspections of the observers, and by a comparison with tonal fusion.] **N. Lossky.** 'Eine Willenstheorie vom voluntaristischen Standpunkte.' [After a preliminary definition of voluntarism, as that psychological theory which makes voluntary actions typical of conscious process at large, the author discusses the constituents of the voluntary action, under the headings of effort; the feeling of activity; change; and states of consciousness. "All phenomena in the individual consciousness may be divided into three groups: acts of will ('my acts'), 'acts in me' [the psychical processes consisting of the efforts given to me and the corresponding changes], and states of consciousness." These latter are mental phenomena (*e.g.*, the sensation black) which are not preceded by any effort, whether 'mine' or 'given to me'. The author's conclusion is summed up in three propositions. (1) Every state of consciousness, so far as it is felt (*empfunden*) as state of my consciousness, includes all the elements of a voluntary act: namely, my effort, the feeling of my activity, and a change attended by the feeling of satisfaction or dissatisfaction; and appears to me as if produced by me. Only efforts can be felt as 'mine,' even in the case that they are not accompanied by the other elements of the voluntary act. (2) All conscious processes, so far as they are felt as 'mine,' include all the elements of the voluntary act, and are *caused* by 'my' efforts. Voluntarism may be finally defined as that psychological theory which sets out from this generalisation. (3) Will is the activity of consciousness, consisting in the fact that every state of consciousness directly felt as 'mine' is caused by 'my' efforts, and manifesting itself for the acting subject in the feeling of activity.] Literaturbericht. Bd. xxx., Heft 3. **E. Reimann.** 'Die scheinbare Vergrösserung der Sonne und des Mondes am Horizont. ii. Beobachtungen und Theorie.' [Observation proves that the apparent diameter of the sun at the horizon

is more than thrice as great as its diameter at the zenith. Experiments with discs, undertaken with the view of testing theoretical interpretations of this phenomenon, lead to the conclusion that distance is the controlling factor. Of two objects seen under the same visual angle, the more remote appears the greater. And we take the sun at the horizon to be more remote, because we see it projected upon the apparent surface of the sky, and this surface is more remote at the horizon than at the zenith. Experiments leave no doubt as to the watch-glass shape of the sky; height stands to horizontal radius, on the average, as 1 : 3·5. Finally, the explanation of this flattening must be sought in the presence of the atmosphere: the author works out his theory by comparing the air to fog or to a series of apposed glass plates. The clouded sky follows (or adapts itself to) the contour of the cloudless, not *vice versa*.] **E. Wiersma.** 'Die Ebbinghaussche Combinations-methode.' [Test of Ebbinghaus' method of mutilated texts, with three groups of school children,—the schools being so chosen that the factors of age, sex, mental endowment, practice, fatigue could in large measure be isolated for separate study. Elaborate report of results: we can here merely note that Ebbinghaus' own results are entirely confirmed. For psychopathological studies, the author emphasises the recommendation that the texts employed be not too easy.] Literaturbericht. Heft 4. **F. Schumann.** 'Beiträge zur Analyse der Gesichtswahrnehmungen. iii. Der Successivvergleich.' [(1) The first section is occupied with a detailed proof of the fact (already well established by American investigators) that the presence of a memory image is not necessary for a judgment of comparison. (2) What, then, happens in such a judgment? The author emphasises four points: the 'cutting off' of a part-magnitude, the expansion and contraction of attention and the effect of absolute impression. He attempts an ontogenetic interpretation of the last-named factor. (3) The residual influence of the first perception cannot be accounted for by 'unconscious' mental processes or by cortical physiological processes. It is, perhaps, to be referred to subcortical centres: observations of Helmholtz and Hering bear out this conjecture: at the same time, the theory will not work in all cases. Ebbinghaus' eye-movement theory is also inadequate. On the whole, then, the 'cutting off' is to be ascribed to attention; while the effect of absolute impression must be assigned to residual factors identical with those that condition the revival of ideas, and standing in close relation to the concept. The second part of the paper is taken up with an application of this theory of successive comparison to a large number of the standard optical illusions. The evidence offered is mainly that of introspective detail, and cannot well be summarised. The fact that many of the illusions lessen or disappear with continued observation is regarded by the author as in so far a proof of their foundation in judgment rather than in perception. Experiments with rectangles bring out the subjective accentuation of the *relatively* longer side. Pure contrast illusions are referable to 'Einstellung' or 'innere Anpassung'. The Müller-Lyer (arrow-head and feather) illusion is carefully analysed, and Wundt's interpretation rejected.] **H. Ebbinghaus.** 'Ein neuer Apparat zur Kontrolle des Chronoskops.' [A fairly cheap instrument, of great accuracy, embodying essentially the principle of the original Hipp fall-apparatus.] Literaturbericht. Heft 5 und 9. **F. Schumann.** 'Beiträge zur Analyse der Gesichtswahrnehmungen: Schluss.' [The author concludes his discussion with detailed criticisms of Lipps' theory of the play of mechanical forces and of Witasek's theory of perceptual illusion. He polemises successfully against Lipps' doctrine of the memory image (*Vorstellungsbild*), and attacks Meinong's law that "judgments which

express a diversity are, when referred not to the objects objectively compared but to the ideas which underlie the comparison, evident, and therefore true and right". This part of the polemic is less convincing; though Schumann is undoubtedly right in rejecting the evidence for the perceptual theory that has been found in Stadelmann's hypnotic experiments. A discussion of the eye-movement theory is promised at a future date. The paper ends with a summary, the principal points of which are: the dispensableness of a memory image in judgments of comparison; the introspective warrant for the secondary impressions of 'cutting off,' of expansion and contraction, and of absolute impression of size; and the reference of the geometrical optical illusions to judgment rather than to perception.] **R. Mueller.** 'Zur Kritik der Verwendbarkeit der plethysmographischen Curve für psychologische Fragen.' [An elaborate investigation into the physiological conditions of the plethysmographic curve and its variations, intended to cast doubt upon the psychological deductions especially of Lehmann and Wundt. Part i., on the instrument and the single-volume curve, traces the history of the plethysmograph, indicates sources of error, and sharply distinguishes the pressure-curve of the sphygmograph from the volume-curve of the plethysmograph (Fick, von Kries). Part ii., on the periodic oscillations of the volume-curve, treats particularly of the Traube-Hering waves and the Mayer oscillations, while it also points out the appearance and characteristics of stimulus-waves and oscillations due to interference. The paper is soberly written, and keeps clear of polemic: it is a valuable addition to the literature of the subject.] **R. Saxinger.** 'Dispositions-psychologisches über Gefühlscomplexionen.' [(1) The author raises the questions whether feelings may exist side by side in consciousness ('coexistent' feelings), whether they must fuse to a total feeling ('compound' feelings), whether both forms of complex feeling are found, according to circumstances, what is the nature of the total feeling, etc. Two preliminary sections deal with the dependence of feeling on the content of idea, and with the induction of change in affective disposition by feeling. (2) He proceeds to show, logically and by examples, that feelings may exist side by side in the same consciousness. This proposition holds when all weight is allowed to explanation in terms of ideated feeling (*Vorstellung eines Gefühls*) and of Meinong's *Phantasiegefühle*, processes psychologically intermediate between idea and feeling proper. (3) More than this: the fusion of partial feelings to a total feeling, so generally maintained in the psychologies, cannot be substantiated. Lehmann's principles of causation and association break down when closely examined. The analogy of the underlying complexions (*Complexionsvorstellungen*) leads, when fully carried out, to results diametrically opposite to those first suggested. The doctrines of affective compensation and of affective reinforcement can readily be harmonised with the law of coexistence. (4) Positive introspection confirms the argument: Wundt's instances of doubt and of common feeling are really cases of coexistence. (5) Ribot's theory of abstraction and Elsenhaus' of generalisation of the feelings must now be remodelled to fit the facts.] **L. W. Stern.** 'Der Tonvariator.' [Improved form of the author's blown bottle instrument for the production of continuously changing tones. See *Zeit.*, xi., 1895, 4.] **W. von Zehender.** 'Zur Abwehr einer Kritik des Herrn Storch.' [Reply to criticism of the author's articles of 1899 and 1900, which explained various illusions on the basis of Volkmann's observation that lines which appear parallel really diverge from below upwards.] Literaturbericht. Bd. xxxi., Heft 1. **C. Rieger.** 'Ueber Muskelzustände.' [First part of a paper in which the writer seeks to prove the thesis that "die Muskeln

lediglich als elastische Bänder zu betrachten sind, deren Zugkraft ausschliesslich bestimmt ist: erstens durch ihre Länge, zweitens durch ihre Temperatur".] **T. Lipps.** 'Fortsetzung der "Psychologischen Streitpunkte". iv. Zur Frage der geometrisch-optischen Täuschungen. v. Zur Psychologie der "Annahmen".' [The first of these critiques deals with the recent papers of Witasek and Benussi; the author finds in their results confirmation of his own theory of the geometrical optical illusions. The second consists of a series of brief notes upon Meinong's book *Ueber Annahmen*.] Literaturbericht.

Zeitschrift für Philosophie und Philosophische Kritik. Bd. cxxi., Heft 1. **Eduard von Hartmann.** 'Die Psychophysische Causalität.' [Neither the epiphenomenal theory, nor the double-aspect theory, nor subjective idealism is true. There is a genuine action and reaction between body and soul. To understand it we must adopt the dynamic theory of matter. And we must distinguish between materialising and non-materialising forces. The former, which produce the appearance of solidity and extension, radiate from a central point: they attract and repel; they are subject to the law of action and reaction. These constitute the inorganic world. The latter (non-materialising) are not central, and otherwise have their own laws. They appear along with vital phenomena, which can only be understood by assuming their activity. But they are subject to the conservation of energy. Then, again, mind is composed of a conscious and an unconscious layer, between which what the author calls 'allotropic causality' obtains. In this way we get an intelligible connexion between the will and the muscles as well as between the organs of sense and the intelligence.] **Prof. Dr. Zahlfleisch.** 'Die Gefühle als Symptome Psychischer Abnormität.' [The feelings are nuisances, symptoms of a disordered mental condition which it is important to set right as quickly as possible. The first step is to define as precisely as may be the particular feeling experienced, the second to ascertain its cause, and the last to prevent its recurrence.] **Dr. Edmund Neuendorf.** 'Anmerkungen zu Lotzes Weltanschauung' [Lotze cannot be tied down either to monism or to monadology. Sometimes he seems to lean to the one and sometimes to the other. Such inconsistency was of a piece with his whole intellectual character. There are rigidly consistent philosophers who, starting with two or three principles, push them to their logical conclusions. Others of a more hospitable and genial turn take in ideas from all quarters, and have something to offer readers of all tastes. These stimulating eclectics, of whom Lotze was one, are perhaps more helpful than the stricter sort.] **Prof. L. von Bortkiewicz.** 'Wahrscheinlichkeitstheorie und Erfahrung.' [A controversial paper on the theory of probability impossible to summarise here.] **Theodor Elsenhans.** 'Theorie des Gewissens.' [Conscience consists primarily of ethical feelings. These are called up by single words and, in a much greater degree of intensity, by represented actions. The particular note of the ethical feelings known as conscience is that they relate to our own self. Further, they are always related to actions, and specifically to actions affecting the weal or woe of living beings, and involve a sympathetic representation of the feelings produced in such beings by the related actions. As motives conscientious feelings claim an unconditional supremacy over every other motive. Into the mental experience so defined and isolated there enter as variable constituents a number of distinct feelings such as family affection, honour, patriotism, and religion; and also feelings associated with the objects or abstract interests—art and science for instance—whence duties are derived. The result is a remarkably complex feeling closely analogous to the cœnæsthesis in

which all our organic sensations are summed up. The evolution of conscience is reserved for a subsequent discussion.] 'Recensionen.' [Among these is a long review of Dr. Stout's *Analytic Psychology*.] Heft 2. **Theodor Elsenhans.** 'Theorie des Gewissens (Schluss).' [Conscience in the individual cannot be entirely accounted for by experience, and must to that extent be described as innate. The variety of existing moral standards is no proof to the contrary any more than the innateness of reason is disproved by the divergent standards of truth. This aboriginal conscience cannot be reduced to the intuition of an abstract obligation: it is inconceivable without a concrete content. But we cannot tell definitely to what that content amounts. The development of conscience is determined on the one hand by the natural growth of society, and on the other by the development of intelligence. Among subsidiary influences art deserves particular mention as fostering the sense of ideality.] **Prof. M. Guggenheim.** 'Beiträge zur Biographie des Petrus Ramus.' [Two points of interest are here incidentally touched on, the great revival of Aristotelianism in the second half of the sixteenth century, and the Erastian tendencies of Ramus as against Calvinistic theocracy.] **Prof. Dr. O. Schneider.** 'Die schöpferische Kraft des Kindes.' [A series of minute observations on two little girls, the writer's own children, which in his opinion go to prove the manifestation of distinctively human faculty at a very early stage of infant consciousness, and the application of intellectual and moral categories in anticipation of experience and independently of imitation.] **L. William Stern.** 'Der zweite Hauptsatz der Energetik und das Lebensproblem.' [The writer denies the doctrine of entropia, generally accepted by physicists and eagerly embraced by Hartmann in the interests of pessimism. Admitting, on Carnot's principle, that the performance of work and therefore the existence of life is conditioned by the unequal distribution of energy in space, and admitting further that this inequality is continually diminishing through the dissipation of motion under the form of heat, it does not follow that a state of complete equilibrium can be reached in a finite time. According to Stern the real relation between increasing time and diminishing tension is asymptotic: they approach but never meet. But granting so much it might be urged that the tension at the end of a finite time will have become too feeble to admit of the existence of life. The difficulty is met by pointing out that the reduction of the mean tension within a given system has nothing to do with its proportionate distribution among the partial tensions in the total quantity of energy included. There might even be an absolute increase in that particular tension whence life results. A discussion of the special relations between life and energy is reserved for a future article.] **Johannes Volkelt.** 'Beiträge zur Analyse des Bewusstseins.' [The feelings produced by the contemplation of a work of art fall into two classes: sympathetic appropriation of those experienced by the persons represented, and subjective feelings produced directly in ourselves by the incidents exhibited as admiration, pity, or terror. Volkelt maintains against Konrad Lange that the emotions so excited are not merely represented feelings but the actual feelings themselves, although they may be weakened to any extent by the consciousness that they arise from fictitious causes.]

PHILOSOPHISCHE STUDIEN. Bd. xviii., Heft 3. **M. Geiger.** 'Neue Complicationsversuche.' [A re-investigation of the technique and of the psychological significance of complication experiments. The results of the Leipzig observers (Wundt, von Tschisch, Pflaum), all obtained with the complication pendulum, are on the whole in agreement: though there are significant differences between those of Pflaum and of the

earlier investigators. On the other hand, the results of Angell and Pierce, whose complication apparatus gave the visual series with constant rapidity, are discrepant. Moreover, there is no sort of unity in the matter of psychological explanation. (1) New experiments were undertaken with a complication clock, *i.e.*, an instrument whose hand moved at constant rapidity, and not with the acceleration of the pendulum-hand. The first question was, to decide between the positions of the Leipzig workers and of Angell and Pierce: the former found an influence of rapidity, but none of practice; the latter, a marked influence of practice, but none of rapidity. The new experiments show that, under the revised conditions, both factors are at work: increasing practice and increasing rapidity induce a positive tendency to temporal displacement (Wundt's terminology), decreasing rapidity a tendency to negative displacement. But further: the observers fall into two types,—a naïve type, who await the course of events, and let the apparatus (so to speak) decide for them the point of coincidence, and a reflective type, who actively exert themselves to discover the right scale-mark. The former may be called the 'hand,' the latter the 'scale' observers: the former also are objective, the latter subjective. Type affects both size and kind of error. Both types show the effect of practice: only the naïve that of rapidity, at least with any clearness. The naïve observers give negative, the reflective predominantly positive displacements. Other factors at work in the total result are individual differences, accidental changes of disposition from day to day, differences in the length of the scale-marks on the clock-face, and the spacial position (above, below, etc.) of the mark at which the bell sounds. (2) The author now gives a detailed criticism of the theories of von Tschisch, James, Pierce and Angell, and Ebbinghaus. He finds the key to the gross phenomena in the adaptation of attention to the series of impressions (Wundt's *Spannungswachsthum der Aufmerksamkeit*). The explanation is fully worked out: it cannot well be summarised here. Accidental predirections of attention also play their part, as does a diversion of preadjusted attention by the prominence of certain ideas within a mental whole. The error of position is accounted for by the relative ease of downward movement of the eyes, by the after-effect of previous experiences of movement, and by the prominence given to the upper and lower ends of the vertical diameter as points of reversal of movement.]

P. Bader. 'Das Verhältniss der Hautempfindungen und ihrer nervösen Organe zu calorischen, mechanischen und faradischen Reizen.' [A study undertaken with the view of comparing the sensations aroused by the same stimulus at different points upon the skin. In general, the existence of cold, warm, pain, pressure, and anæsthetic and analgesic spots is confirmed. (1) *Cold spots.* The three intensities, cool, cold, icy; detailed account of the perceptions set up by application of temperature stimuli to cold spots (report of seven expts.); the limen of the paradoxical cold sensation (the sensation occurred with stimuli under 31° C.; a lower limen exists only in the sense that there is a limit at which all or nearly all of the cold spots reply to stimulation, while below it they fail to respond; the constant characteristic of the sensation is its discontinuous course); cold sensations are easily aroused, in most cases, by mechanical stimulation of the spots (four expts.); not all spots respond to faradisation, and the sensation is discontinuous; it is probable that the arousal of a paradoxical cold sensation involves stimulation of the end-organ, the neighbouring nervous organs, and their corresponding nerve-fibres. (2) *Warm spots.* Characterisation of the sensation; the degrees of warm and hot. Heat is not a mixed excitation of warm and cold, as Alrutz declares. The warm spots do not respond freely to

mechanical and faradic stimulation. The reference of the sensations to separate organs (von Frey) overlooks the causal interrelation of warmth perception and vasomotor changes. (3) *Pain spots.* Distinction of the pain from the pain spots, and the pain from temperature and pressure stimuli. As regards the latter, "all sensory nerves seem to be pain-sensitive for certain stimuli". Mechanical stimulation of analgesic spots (seven expts.); faradisation of algesic and analgesic spots (two expts.). (4) *Pressure spots* are to be referred (von Frey) to the Meissner corpuscles and the nerve-skeins at the hair-bulbs; pain spots to the free nerve-endings of the epidermis.] **W. Churchill.** 'Die Orientirung der Tasteindrücke an den verschiedenen Stellen der Körperoberfläche.' [Systematic extension of E. H. Weber's experiments. The forms B, L, M, P, R, S and W were traced, in all four possible space-relations (reversed, upside down), upon various parts of the skin, and the observer recorded his spatial interpretation of the impression. The body fell into three principal regions of orientation: face (forehead, checks, chin); the anterior surface, from the neck down; the whole posterior surface. The first region shows, as a rule, simple reversal: P is perceived as ꟼ. The third gives correct orientation. The second shows three types of judgment: normal, reversed, and reversal with inversion. Experiments on blind subjects yield practically the same results. Theory of the phenomena, setting out from a schematic translation of the letters from an upright sheet before the face to the various parts of the body, and stressing the factor of the relative accessibility of the parts stimulated, by change from the normal carriage of the body.] **E. von Hartmann.** 'Die Finalität in ihrem Verhältniss zur Causalität.' [Legitimates, against König, the place of the category of finality in the world of natural phenomena.]

Archiv für Systematische Philosophie. N.F. Bd. ix., Heft 2. **E. von Hartmann.** 'Mechanismus und Vitalismus in der modernen Biologie.' [Mainly Historical. Passes in review J. Müller, von Liebig, E. du Bois Raymond, Lotze, Fechner, Virchow and Rondfleisch, Wundt, von Baer, Bunge and Hamann, Kassowitz, Hertwig, Haacke, Weismann, Bütschli, Eimer and Ziegler, Wolf, Driesch, J. Reinke, F. Reinke, Helmholtz, Hertz, and P. du Bois Raymond.] **A. Goldeckemeyer.** 'Das Wesen des Urteils.' [The main point urged is that only negative and mediate judgment are attended by that consciousness of necessary connexion which is essential to judgment in the strict sense. Positive judgments are not properly speaking judgments at all.] **E. Wentscher.** 'Phänomenalismus und Realismus.' [A defence of Kantian Phenomenalism against W. Freytag.] **B. Weiss.** 'Gesetze des Geschehens.' [E. Husserl critically reviews Bergmann's new edition of *Die Grundprobleme der Logik.*]

Rivista Filosofica. Anno iv., vol. v., Fasc. v., November-December. **V. Alemanni.** 'La filosofia di Pietro Ceretti.' [An account of a little-known Italian thinker, who proposed to substitute a self-developing consciousness as Absolute for the Idea of Hegel.] **B. Varisco.** 'Pensiero e realtà (continᵉ e fine).' [Renouvier's relativism might, on his own premisses, be developed into Epicurean atomism.] **E. Groppali.** 'Il problema dell' origine e del fondamento intrinsico del diritto nelle opere del Romagnosi.' [While retaining the idea of Natural Law in jurisprudence, Romagnosi rejected the idea of a social contract and of a 'natural' man. The laws of Nature as originally instituted by a divine intelligence furnish a model for formulating the rule of right. The relations between man and Nature have to be studied and kept in view by the moralist: they are not invariable, but are subject to a gradual and orderly

readjustment. An ideal of humanity is continually realising itself in history. In some points Romagnosi anticipated Herbert Spencer. His religious opinions were different, and his scientific range was much narrower, but he soared to more ideal heights.] **G. De la Valle.** 'Il problema dell' assoluto con particulare riguardo alla dottrine di Gaetano Negri.' [Confronted by Spencer's 'unknowable reality,' Negri refused to accept it, and identified the Absolute with the Relative, *i.e.*, with the sum of existence.] **Benedetto Croce.** 'Questione estetiche.' [Reasserts his positions against Faggi.] Rassegna Bibliografica, etc.

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

I.—THE REFUTATION OF IDEALISM.

By G. E. Moore.

Modern Idealism, if it asserts any general conclusion about the universe at all, asserts that it is *spiritual*. There are two points about this assertion to which I wish to call attention. These points are that, whatever be its exact meaning, it is certainly meant to assert (1) that the universe is very different indeed from what it seems, and (2) that it has quite a large number of properties which it does not seem to have. Chairs and tables and mountains *seem* to be very different from us; but, when the whole universe is declared to be spiritual, it is certainly meant to assert that they are far more like us than we think. The idealist means to assert that they are *in some sense* neither lifeless nor unconscious, as they certainly seem to be; and I do not think his language is so grossly deceptive, but that we may assume him to believe that they really are very different indeed from what they seem. And secondly when he declares that they are *spiritual*, he means to include in that term quite a large number of different properties. When the whole universe is declared to be spiritual, it is meant not only that it is in some sense *conscious*, but that it has what we recognise in ourselves as the *higher* forms of consciousness. That it is intelligent; that it is purposeful; that it is not mechanical; all these different things are commonly asserted of it. In general, it may be said, this phrase 'reality is spiritual' excites and expresses the belief that the *whole* universe possesses *all the qualities* the posses-

sion of which is held to make us so superior to things which seem to be inanimate: at least, if it does not possess exactly those which we possess, it possesses not one only, but several others, which, by the same ethical standard, would be judged equal to or better than our own. When we say it is *spiritual* we mean to say that it has quite a number of excellent qualities, different from any which we commonly attribute either to stars or planets or to cups and saucers.

Now why I mention these two points is that when engaged in the intricacies of philosophic discussion, we are apt to overlook the vastness of the difference between this idealistic view and the ordinary view of the world, and to overlook the number of *different* propositions which the idealist must prove. It is, I think, owing to the vastness of this difference and owing to the number of different excellencies which Idealists attribute to the universe, that it seems such an interesting and important question whether Idealism be true or not. But, when we begin to argue about it, I think we are apt to forget what a vast number of arguments this interesting question must involve: we are apt to assume, that if one or two points be made on either side, the whole case is won. I say this lest it should be thought that any of the arguments which will be advanced in this paper would be sufficient to disprove, or any refutation of them sufficient to prove, the truly interesting and important proposition that reality is spiritual. For my own part I wish it to be clearly understood that I do not suppose that anything I shall say has the smallest tendency to prove that reality is not spiritual: I do not believe it possible to refute a single one of the many important propositions contained in the assertion that it is so. Reality may be spiritual, for all I know; and I devoutly hope it is. But I take 'Idealism' to be a wide term and to include not only this interesting conclusion, but a number of arguments which are supposed to be, if not sufficient, at least *necessary*, to prove it. Indeed I take it that modern Idealists are chiefly distinguished by certain arguments which they have in common. That reality is spiritual has, I believe, been the tenet of many theologians; and yet, for believing that alone, they should hardly be called Idealists. There are besides, I believe, many persons, not improperly called Idealists, who hold certain characteristic propositions, without venturing to think them quite sufficient to prove so grand a conclusion. It is, therefore, only with Idealistic *arguments* that I am concerned; and if any Idealist holds that *no* argument is necessary to prove that reality is spiritual, I shall certainly not have refuted him. I shall, however, at-

tack at least one argument, which, to the best of my belief, is considered necessary to their position by *all* Idealists. And I wish to point out a certain advantage which this procedure gives me—an advantage which justifies the assertion that, if my arguments are sound, they will have refuted Idealism. If I can refute a single proposition which is a necessary and essential step in all Idealistic arguments, then, no matter how good the rest of these arguments may be, I shall have proved that Idealists have *no reason whatever* for their conclusion.

Suppose we have a chain of argument which takes the form: Since A is B, and B is C, and C is D, it follows A is D. In such an argument, though 'B is C' and 'C is D' may both be perfectly true, yet if 'A is B' be false, we have no more reason for asserting A is D than if all three were false. It does not, indeed, follow that A is D is false; nor does it follow that no other arguments would prove it to be true. But it does follow that, so far as this argument goes, it is the barest supposition, without the least bit of evidence. I propose to attack a proposition which seems to me to stand in this relation to the conclusion 'Reality is spiritual'. I do not propose to dispute that 'Reality is spiritual'; I do not deny that there may be reasons for thinking that it is: but I do propose to show that one reason upon which, to the best of my judgment, all other arguments ever used by Idealists depend is *false*. These other arguments may, for all I shall say, be eminently ingenious and true; they are very many and various, and different Idealists use the most different arguments to prove the same most important conclusions. Some of these *may* be sufficient to prove that B is C and C is D; but if, as I shall try to show, their 'A is B' is false, the conclusion A is D remains a pleasant supposition. I do not deny that to suggest pleasant and plausible suppositions may be the proper function of philosophy: but I am assuming that the name Idealism can only be properly applied where there is a certain amount of argument, intended to be cogent.

The subject of this paper is, therefore, quite uninteresting. Even if I prove my point, I shall have proved nothing about the Universe in general. Upon the important question whether Reality is or is not spiritual my argument will not have the remotest bearing. I shall only attempt to arrive at the truth about a matter, which is in itself quite trivial and insignificant, and from which, so far as I can see and certainly so far as I shall say, no conclusions can be drawn about any of the subjects about which we most want to know. The

only importance I can claim for the subject I shall investigate is that it seems to me to be a matter upon which not Idealists only, but all philosophers and psychologists also, have been in error, and from their erroneous view of which they have inferred (validly or invalidly) their most striking and interesting conclusions. And that it has even this importance I cannot hope to prove. If it has this importance, it will indeed follow that all the most striking results of philosophy—Sensationalism, Agnosticism and Idealism alike—have, for all that has hitherto been urged in their favour, no more foundation than the supposition that a chimera lives in the moon. It will follow that, unless new reasons never urged hitherto can be found, all the most important philosophic doctrines have as little claim to assent as the most superstitious beliefs of the lowest savages. Upon the question what we have *reason* to believe in the most interesting matters, I do, therefore, think that my results will have an important bearing; but I cannot too clearly insist that upon the question whether these beliefs are true they will have none whatever.

The trivial proposition which I propose to dispute is this: that *esse* is *percipi*. This is a very ambiguous proposition, but, in some sense or other, it has been very widely held. That it is, in some sense, essential to Idealism, I must for the present merely assume. What I propose to show is that, in all the senses ever given to it, it is false.

But, first of all, it may be useful to point out briefly in what relation I conceive it to stand to Idealistic arguments. That wherever you can truly predicate *esse* you can truly predicate *percipi*, in some sense or other, is, I take it, a necessary step in all arguments, properly to be called Idealistic, and, what is more, in all arguments hitherto offered for the Idealistic conclusion. If *esse* is *percipi*, this is at once equivalent to saying that whatever is is experienced; and this, again, is equivalent, in a sense, to saying that whatever is is something mental. But this is not the sense in which the Idealist *conclusion* must maintain that Reality is *mental*. The Idealist *conclusion* is that *esse* is *percipere*; and hence, whether *esse* be *percipi* or not, a further and different discussion is needed to show whether or not it is also *percipere*. And again, even if *esse* be *percipere*, we need a vast quantity of further argument to show that what has *esse* has also those higher mental qualities which are denoted by spiritual. This is why I said that the question I should discuss, namely, whether or not *esse* is *percipi*, must be utterly insufficient either to prove or to disprove that reality is spiritual. But, on the other hand,

I believe that every argument ever used to show that reality is spiritual has inferred this (validly or invalidly) from '*esse* is *percipere*' as one of its premisses; and that this again has never been pretended to be proved except by use of the premiss that *esse* is *percipi*. The type of argument used for the latter purpose is familiar enough. It is said that since whatever is, is experienced, and since some things are which are not experienced by the individual, these must at least form part of some experience. Or again that, since an object necessarily implies a subject, and since the whole world must be an object, we must conceive it to belong to some subject or subjects, in the same sense in which whatever is the object of our experience belongs to us. Or again, that, since thought enters into the essence of all reality, we must conceive behind it, in it, or as its essence, a spirit akin to ours, who think: that 'spirit greets spirit' in its object. Into the validity of these inferences I do not propose to enter: they obviously require a great deal of discussion. I only desire to point out that, however correct they may be, yet if *esse* is not *percipi*, they leave us as far from a proof that reality is spiritual, as if they were all false too.

But now: Is *esse percipi?* There are three very ambiguous terms in this proposition, and I must begin by distinguishing the different things that may be meant by some of them.

And first with regard to *percipi*. This term need not trouble us long at present. It was, perhaps, originally used to mean 'sensation' only; but I am not going to be so unfair to modern Idealists—the only Idealists to whom the term should now be applied without qualification—as to hold that, if they say *esse* is *percipi*, they mean by *percipi* sensation only. On the contrary I quite agree with them that, if *esse* be *percipi* at all, *percipi* must be understood to include not sensation only, but that other type of mental fact, which is called 'thought': and, whether *esse* be *percipi* or not, I consider it to be the main service of the philosophic school, to which modern Idealists belong, that they have insisted on distinguishing 'sensation' and 'thought' and on emphasising the importance of the latter. Against Sensationalism and Empiricism they have maintained the true view. But the distinction between sensation and thought need not detain us here. For, in whatever respects they differ, they have at least this in common, that they are both forms of consciousness or, to use a term that seems to be more in fashion just now, they are both ways of experiencing. Accordingly, whatever *esse* is *percipi* may mean, it does *at least* assert that whatever is, is *experienced*. And since what I wish to maintain is, that even this is untrue, the

question whether it be experienced by way of sensation or thought or both is for my purpose quite irrelevant. If it be not experienced at all, it cannot be either an object of thought or an object of sense. It is only, if being involves 'experience,' that the question, whether it involves sensation or thought or both, becomes important. I beg, therefore, that *percipi* may be understood, in what follows, to refer merely to what is *common* to sensation and thought. A very recent article states the meaning of *esse* is *percipi* with all desirable clearness in so far as *percipi* is concerned. 'I will undertake to show,' says Mr. Taylor,[1] 'that what makes [any piece of fact] real can be nothing but its presence as an inseparable aspect of *a sentient experience*.' I am glad to think that Mr. Taylor has been in time to supply me with so definite a statement that this is the ultimate premiss of Idealism. My paper will at least refute Mr. Taylor's Idealism, if it refutes anything at all: for I *shall* undertake to show that what makes a thing real cannot possibly be its presence as an inseparable aspect of a sentient experience.

But Mr. Taylor's statement, though clear, I think, with regard to the meaning of *percipi*, is highly ambiguous in other respects. I will leave it for the present to consider the next ambiguity in the statement: *Esse* is *percipi*. What does the copula mean? What can be meant by saying that esse *is* percipi? There are just three meanings, one or other of which such a statement *must* have, if it is to be true: and of these there is only one which it can have, if it is to be important. (1) The statement may be meant to assert that the word 'esse' is used to signify nothing either more or less than the word 'percipi': that the two words are precise synonyms: that they are merely different names for one and the same thing: that what is meant by *esse* is absolutely identical with what is meant by *percipi*. I think I need not prove that the principle *esse* is *percipi* is *not* thus intended merely to define a word; nor yet that, if it were, it would be an extremely bad definition. But if it does *not* mean this, only two alternatives remain. The second is (2) that what is meant by *esse*, though not absolutely identical with what is meant by *percipi*, yet *includes* the latter as *a part* of its meaning. If this were the meaning of 'esse is percipi,' then to say that a thing was real would not be the same thing as to say that it was experienced. That it was *real* would mean that it was experienced and *something else besides*: 'being experienced' would be *analytically essential* to reality, but

[1] *International Journal of Ethics*, October, 1902.

would not be the whole meaning of the term. From the fact that a thing was real we should be able to infer, by the law of contradiction, that it was experienced; since the latter would be *part* of what is meant by the former. But, on the other hand, from the fact that a thing was experienced we should *not* be able to infer that it was real; since it would not follow from the fact that it had one of the attributes essential to reality, that it *also* had the other or others. Now, if we understand *esse* is *percipi* in this second sense, we must distinguish *three* different things which it asserts. First of all, it gives a definition of the word 'reality': asserting that that word stands for a complex whole, of which what is meant by 'percipi' forms a part. And secondly it asserts that 'being experienced' forms a part of a certain whole. Both these propositions may be true, and at all events I do not wish to dispute them. I do not, indeed, think that the word 'reality' is commonly used to include 'percipi'; but I do not wish to argue about the meaning of words. And that many things which are experienced are also something else—that to be experienced forms part of certain wholes, is, of course, indisputable. But what I wish to point out is that neither of these propositions is of any importance, unless we add to them a *third*. That 'real' is a convenient name for a union of attributes which *sometimes* occurs, it could not be worth any one's while to assert: no inferences of any importance could be drawn from such an assertion. Our principle could only mean that when a thing happens to have *percipi* as well as the other qualities included under *esse*, it has *percipi:* and we should never be able to *infer* that it was experienced, except from a proposition which already asserted that it was both experienced and something else. Accordingly, if the assertion that *percipi* forms part of the whole meant by reality is to have any importance, it must mean that the whole is organic, at least in this sense, that the other constituent or constituents of it *cannot* occur without percipi, even if percipi can occur without them. Let us call these other constituents x. The proposition that *esse* includes *percipi*, and that therefore from *esse percipi* can be inferred, can only be important if it is meant to assert that *percipi* can be inferred from x. The only importance of the question whether the whole *esse* includes the part *percipi* rests therefore on the question whether the part x is necessarily connected with the part *percipi*. And this is (3) the third possible meaning of the assertion *esse is percipi:* and, as we now see, the only important one. *Esse* is *percipi* asserts that wherever you have x you also have *percipi:* that whatever

has the property x also has the property that it is *experienced*. And this being so, it will be convenient if, for the future, I may be allowed to use the term '*esse*' to denote *x alone*. I do not wish thereby to beg the question whether what we commonly mean by the word 'real' does or does not include *percipi* as well as x. I am quite content that my definition of 'esse' to denote x, should be regarded merely as an arbitrary verbal definition. Whether it is so or not, the only question of interest is whether from x *percipi* can be inferred, and I should prefer to be able to express this in the form: can *percipi* be inferred from *esse?* Only let it be understood that when I say *esse*, that term will not for the future *include percipi:* it denotes only that x, which Idealists, perhaps rightly, include *along with percipi* under *their* term *esse*. That there is such an x they must admit on pain of making the proposition an *absolute* tautology; and that from this x *percipi* can be inferred they must admit, on pain of making it a perfectly barren analytic proposition. Whether x alone should or should not be called *esse* is not worth a dispute: what is worth dispute is whether *percipi* is necessarily connected with x.

We have therefore discovered the ambiguity of the copula in *esse* is *percipi*, so far as to see that this principle asserts two distinct terms to be so related, that whatever has the *one*, which I call *esse*, has *also* the property that it is experienced. It asserts a necessary connexion between *esse* on the one hand and *percipi* on the other; these two words denoting each a distinct term, and *esse* denoting a term in which that denoted by *percipi* is not included. We have, then, in *esse* is *percipi*, a *necessary synthetic* proposition which I have undertaken to refute. And I may say at once that, understood as such, it cannot be refuted. If the Idealist chooses to assert that it is merely a self-evident truth, I have only to say that it does not appear to me to be so. But I believe that no Idealist ever has maintained it to be so. Although this—that two distinct terms are necessarily related—is the only sense which 'esse is percipi' can have if it is to be true and important, it *can* have another sense, if it is to be an important falsehood. I believe that Idealists all hold this important falsehood. They do not perceive that *Esse* is *percipi* must, if true, be *merely* a self-evident synthetic truth: they either identify with it or give as a reason for it another proposition which must be false because it is self-contradictory. Unless they did so, they would have to admit that it was a perfectly unfounded assumption; and if they recognised that it was *unfounded*, I do not think they would maintain its truth to be evident. *Esse* is *percipi*, in the sense

I have found for it, *may* indeed be true; I cannot refute it: but if this sense were clearly apprehended, no one, I think, would *believe* that it was true.

Idealists, we have seen, must assert that whatever is experienced, is *necessarily* so. And this doctrine they commonly express by saying that 'the object of experience is inconceivable apart from the subject'. I have hitherto been concerned with pointing out what meaning this assertion must have, if it is to be an important truth. I now propose to show that it may have an important meaning, which must be false, because it is self-contradictory.

It is a well-known fact in the history of philosophy that *necessary* truths in general, but especially those of which it is said that the opposite is inconceivable, have been commonly supposed to be *analytic*, in the sense that the proposition denying them was self-contradictory. It was, in this way, commonly supposed, before Kant, that many truths could be proved by the law of contradiction alone. This is, therefore, a mistake which it is plainly easy for the best philosophers to make. Even since Kant many have continued to assert it; but I am aware that among those Idealists, who most properly deserve the name, it has become more fashionable to assert that truths are *both* analytic and synthetic. Now with many of their reasons for asserting this I am not concerned: it is possible that in some connexions the assertion may bear a useful and true sense. But if we understand 'analytic' in the sense just defined, namely, what is proved by the law of contradiction *alone*, it is plain that, if 'synthetic' means what is *not* proved by this alone, no truth can be both analytic and synthetic. Now it seems to me that those who do maintain truths to be both, do nevertheless maintain that they are so in this as well as in other senses. It is, indeed, extremely unlikely that so essential a part of the historical meaning of 'analytic' and 'synthetic' should have been entirely discarded, especially since we find no express recognition that it is discarded. In that case it is fair to suppose that modern Idealists have been influenced by the view that certain truths can be proved by the law of contradiction alone. I admit they also expressly declare that they can *not:* but this is by no means sufficient to prove that they do not also think they are; since it is very easy to hold two mutually contradictory opinions. What I suggest then is that Idealists hold the particular doctrine in question, concerning the relation of subject and object in experience, because they think it is an analytic truth in this restricted sense that it is proved by the law of contradiction alone.

I am suggesting that the Idealist maintains that object and subject are necessarily connected, mainly because he fails to see that they are *distinct*, that they are *two*, at all. When he thinks of 'yellow' and when he thinks of the 'sensation of yellow,' he fails to see that there is anything whatever in the latter which is not in the former. This being so, to deny that yellow can ever *be* apart from the sensation of yellow is merely to deny that yellow can ever be other than it is; since yellow and the sensation of yellow are absolutely identical. To assert that yellow is necessarily an object of experience is to assert that yellow is necessarily yellow—a purely identical proposition, and therefore proved by the law of contradiction alone. Of course, the proposition also implies that experience is, after all, something distinct from yellow—else there would be no reason for insisting that yellow is a sensation: and that the argument thus both affirms and denies that yellow and sensation of yellow are distinct, is what sufficiently refutes it. But this contradiction can easily be overlooked, because though we are convinced, in other connexions, that 'experience' does mean something and something most important, yet we are never distinctly aware *what* it means, and thus in every particular case we do not notice its presence. The facts present themselves as a kind of antinomy: (1) Experience *is* something unique and different from anything else; (2) Experience of green is entirely indistinguishable from green; two propositions which cannot both be true. Idealists, holding both, can only take refuge in arguing from the one in some connexions and from the other in others.

But I am well aware that there are many Idealists who would repel it as an utterly unfounded charge that they fail to distinguish between a sensation or idea and what I will call its object. And there are, I admit, many who not only imply, as we all do, that green is distinct from the sensation of green, but expressly insist upon the distinction as an important part of their system. They would perhaps only assert that the two form an inseparable unity. But I wish to point out that many, who use this phrase, and who do admit the distinction, are not thereby absolved from the charge that they deny it. For there is a certain doctrine, very prevalent among philosophers nowadays, which by a very simple reduction may be seen to assert that two distinct things both are and are not distinct. A distinction is asserted; but it is *also* asserted that the things distinguished form an 'organic unity'. But, forming such a unity, it is held, each would not be what it is *apart from its relation to*

the other. Hence to consider either by itself is to make an *illegitimate abstraction*. The recognition that there are 'organic unities' and 'illegitimate abstractions' in this sense is regarded as one of the chief conquests of modern philosophy. But what is the sense attached to these terms? An abstraction is illegitimate, when and only when we attempt to assert of *a part*—of something abstracted—that which is true only of the *whole* to which it belongs: and it may perhaps be useful to point out that this should not be done. But the application actually made of this principle, and what perhaps would be expressly acknowledged as its meaning, is something much the reverse of useful. The principle is used to assert that certain abstractions are *in all cases* illegitimate; that whenever you try to assert *anything whatever* of that which is *part* of an organic whole, what you assert can only be true of the whole. And this principle, so far from being a useful truth, is necessarily false. For if the whole can, nay *must*, be substituted for the part in all propositions and for all purposes, this can only be because the whole is absolutely identical with the part. When, therefore, we are told that green and the sensation of green are certainly distinct but yet are not separable, or that it is an illegitimate abstraction to consider the one apart from the other, what these provisos are used to assert is, that though the two things are distinct yet you not only can but must treat them as if they were not. Many philosophers, therefore, when they admit a distinction, yet (following the lead of Hegel) boldly assert their right, in a slightly more obscure form of words, *also* to deny it. The principle of organic unities, like that of combined analysis and synthesis, is mainly used to defend the practice of holding *both* of two contradictory propositions, wherever this may seem convenient. In this, as in other matters, Hegel's main service to philosophy has consisted in giving a name to and erecting into a principle, a type of fallacy to which experience had shown philosophers, along with the rest of mankind, to be addicted. No wonder that he has followers and admirers.

I have shown then, so far, that when the Idealist asserts the important principle '*Esse* is *percipi*' he must, if it is to be true, mean by this that: Whatever is experienced also *must* be experienced. And I have also shown that he *may* identify with, or give as a reason for, this proposition, one which must be false, because it is self-contradictory. But at this point I propose to make a complete break in my argument. '*Esse* is *percipi*,' we have seen, asserts of two terms, as distinct from one another as 'green' and 'sweet,' that

whatever has the one has also the other: it asserts that 'being' and 'being experienced' are necessarily connected: that whatever *is* is *also* experienced. And this, I admit, cannot be directly refuted. But I believe it to be false; and I have asserted that anybody who saw that '*esse* and *percipi*' *were* as distinct as 'green' and 'sweet' would be no more ready to believe that whatever *is* is *also* experienced, than to believe that whatever is green is also sweet. I have asserted that no one would believe that '*esse* is *percipi*' if they saw how different *esse* is from *percipi*: but *this* I shall not try to prove. I have asserted that all who do believe that '*esse* is *percipi*' identify with it or take as a reason for it a self-contradictory proposition: but this I shall not try to prove. I shall only try to show that certain propositions which I assert to be believed, are false. That they are believed, and that without this belief '*esse* is *percipi*' would not be believed either, I must leave without a proof.

I pass, then, from the uninteresting question 'Is *esse* *percipi*?' to the still more uninteresting and apparently irrelevant question 'What is a sensation or idea?'

We all know that the sensation of blue differs from that of green. But it is plain that if both are *sensations* they also have some point in common. What is it that they have in common? And how is this common element related to the points in which they differ?

I will call the common element 'consciousness' without yet attempting to say what the thing I so call *is*. We have then in every sensation two distinct terms, (1) 'consciousness,' in respect of which all sensations are alike; and (2) something else, in respect of which one sensation differs from another. It will be convenient if I may be allowed to call this second term the 'object' of a sensation: this also without yet attempting to say what I mean by the word.

We have then in every sensation two distinct elements, one which I call consciousness, and another which I call the object of consciousness. This must be so if the sensation of blue and the sensation of green, though different in one respect, are alike in another: blue is one object of sensation and green is another, and consciousness, which both sensations have in common, is different from either.

But, further, sometimes the sensation of blue exists in my mind and sometimes it does not; and knowing, as we now do, that the sensation of blue includes two different elements, namely consciousness and blue, the question arises whether, when the sensation of blue exists, it is the consciousness which exists, or the blue which exists, or both. And one

point at least is plain: namely that these three alternatives are all different from one another. So that, if any one tells us that to say 'Blue exists' is the *same* thing as to say that 'Both blue and consciousness exist,' he makes a mistake and a self-contradictory mistake.

But another point is also plain, namely, that when the sensation exists, the consciousness, at least, certainly does exist; for when I say that the sensations of blue and of green both exist, I certainly mean that what is common to both and in virtue of which both are called sensations, exists in each case. The only alternative left, then, is that *either* both exist *or* the consciousness exists alone. If, therefore, any one tells us that the existence of blue is the same thing as the existence of the sensation of blue he makes a mistake and a self-contradictory mistake, for he asserts *either* that blue is the same thing as blue together with consciousness, *or* that it is the same thing as consciousness alone.

Accordingly to identify either 'blue' or any other of what I have called '*objects*' of sensation, with the corresponding sensation is in every case, a self-contradictory error. It is to identify a part either with the whole of which it is a part or else with the other part of the same whole. If we are told that the assertion 'Blue exists' is *meaningless* unless we mean by it that 'The sensation of blue exists,' we are told what is certainly false and self-contradictory. If we are told that the existence of blue is inconceivable apart from the existence of the sensation, the speaker *probably* means to convey to us, by this ambiguous expression, what is a self-contradictory error. For we can and must conceive the existence of blue as something quite distinct from the existence of the sensation. We can and must conceive that blue might exist and yet the sensation of blue not exist. For my own part I not only conceive this, but conceive it to be true. Either therefore this terrific assertion of inconceivability means what is false and self-contradictory or else it means only that *as a matter of fact* blue never can exist unless the sensation of it exists also.

And at this point I need not conceal my opinion that no philosopher has ever yet succeeded in avoiding this self-contradictory error: that the most striking results both of Idealism and of Agnosticism are only obtained by identifying blue with the sensation of blue: that *esse* is held to be *percipi*, solely because *what is experienced* is held to be identical with *the experience of it*. That Berkeley and Mill committed this error will, perhaps, be granted: that modern Idealists make it will, I hope, appear more probable later. But that my opinion is

plausible, I will now offer two pieces of evidence. The first is that language offers us no means of referring to such objects as 'blue' and 'green' and 'sweet,' except by calling them sensations: it is an obvious violation of language to call them 'things' or 'objects' or 'terms'. And similarly we have no natural means of referring to such objects as 'causality' or 'likeness' or 'identity,' except by calling them 'ideas' or 'notions' or 'conceptions'. But it is hardly likely that if philosophers had clearly distinguished in the past between a sensation or idea and what I have called its object, there should have been no separate name for the latter. They have always used the same name for these two different 'things' (if I may call them so); and hence there is some probability that they have supposed these 'things' *not* to be two and different, but one and the same. And, secondly, there is a very good reason why they should have supposed so, in the fact that when we refer to introspection and try to discover what the sensation of blue is, it is very easy to suppose that we have before us only a single term. The term 'blue' is easy enough to distinguish, but the other element which I have called 'consciousness'—that which sensation of blue has in common with sensation of green—is extremely difficult to fix. That many people fail to distinguish it at all is sufficiently shown by the fact that there are materialists. And, in general, that which makes the sensation of blue a mental fact seems to escape us; it seems, if I may use a metaphor, to be transparent—we look through it and see nothing but the blue; we may be convinced that there *is something*, but *what* it is no philosopher, I think, has yet clearly recognised.

But this was a digression. The point I had established so far was that in every sensation or idea we must distinguish two elements, (1) the 'object,' or that in which one differs from another; and (2) 'consciousness,' or that which all have in common—that which makes them sensations or mental facts. This being so, it followed that when a sensation or idea exists, we have to choose between the alternatives that either object alone or consciousness alone or both exist; and I showed that of these alternatives one, namely that the object only exists, is excluded by the fact that what we mean to assert is certainly the existence of a mental fact. There remains the question: Do both exist? Or does the consciousness alone? And to this question one answer has hitherto been given universally: That both exist.

This answer follows from the analysis hitherto accepted of the relation of what I have called 'object' to 'conscious-

ness' in any sensation or idea. It is held that what I call the object is merely the 'content' of a sensation or idea. It is held that in each case we can distinguish two elements and two only, (1) the fact that there is feeling or experience; and (2) *what* is felt or experienced; the sensation or idea, it is said, forms a whole, in which we must distinguish two 'inseparable aspects,' 'content' and 'existence'. I shall try to show that this analysis is false; and for that purpose I must ask what may seem an extraordinary question: namely what is meant by saying that one thing is 'content' of another? It is not usual to ask this question; the term is used as if everybody must understand it. But since I am going to maintain that 'blue' is *not* the content of the sensation of blue; and, what is more important, that, even if it were, this analysis would leave out the most important element in the sensation of blue, it is necessary that I should try to explain precisely what it is that I shall deny.

What then is meant by saying that one thing is the 'content' of another? First of all I wish to point out that 'blue' is rightly and properly said to be part of the content of a blue flower. If, therefore, we also assert that it is part of the content of the sensation of blue, we assert that it has to the other parts (if any) of this whole the same relation which it has to the other parts of a blue flower—and we assert only this: we cannot mean to assert that it has to the sensation of blue any relation which it does not have to the blue flower. And we have seen that the sensation of blue contains at least one other element beside blue—namely, what I call 'consciousness,' which makes it a sensation. So far then as we assert that blue is the content of the sensation, we assert that it has to this 'consciousness' the same relation which it has to the other parts of a blue flower: we do assert this, and we assert no more than this. Into the question what exactly the relation is between blue and a blue flower in virtue of which we call the former part of its 'content' I do not propose to enter. It is sufficient for my purpose to point out that it is the general relation most commonly meant when we talk of a thing and its qualities; and that this relation is such that to say the thing exists implies that the qualities also exist. The *content* of the thing is *what* we assert to exist, when we assert *that* the thing exists.

When, therefore, blue is said to be part of the content of the 'sensation of blue,' the latter is treated as if it were a whole constituted in exactly the same way as any other 'thing'. The 'sensation of blue,' on this view, differs from a blue bead

or a blue beard, in exactly the same way in which the two latter differ from one another: the blue bead differs from the blue beard, in that while the former contains glass, the latter contains hair; and the 'sensation of blue' differs from both in that, instead of glass or hair, it contains consciousness. The relation of the blue to the consciousness is conceived to be exactly the same as that of the blue to the glass or hair: it is in all three cases the *quality* of a *thing*.

But I said just now that the sensation of blue was analysed into 'content' and 'existence,' and that blue was said to be *the* content of the idea of blue. There is an ambiguity in this and a possible error, which I must note in passing. The term 'content' may be used in two senses. If we use 'content' as equivalent to what Mr. Bradley calls the '*what*'—if we mean by it the *whole* of what is said to exist, when the thing is said to exist, then blue is certainly not *the* content of the sensation of blue: part of the *content* of the sensation is, in this sense of the term, that other element which I have called consciousness. The analysis of this sensation into the 'content' 'blue,' on the one hand, and mere existence on the other, is therefore certainly false; in it we have again the self-contradictory identification of 'Blue exists' with 'The sensation of blue exists'. But there is another sense in which 'blue' might properly be said to be *the* content of the sensation—namely, the sense in which 'content,' like εἶδος, is opposed to 'substance' or 'matter'. For the element 'consciousness,' being common to all sensations, may be and certainly is regarded as in some sense their 'substance,' and by the 'content' of each is only meant that in respect of which one differs from another. In this sense then 'blue' might be said to be *the* content of the sensation; but, in that case, the analysis into 'content' and 'existence' is, at least, misleading, since under 'existence' must be included '*what* exists' in the sensation other than blue.

We have it, then, as a universally received opinion that blue is related to the sensation or idea of blue, as its *content*, and that this view, if it is to be true, must mean that blue is part of *what* is said to exist when we say that the sensation exists. To say that the sensation exists is to say both that blue exists and that 'consciousness,' whether we call it the substance of which blue is *the* content or call it another part of the content, exists too. Any sensation or idea is a '*thing*,' and what I have called its object is the quality of this thing. Such a 'thing' is what we think of when we think of a *mental image*. A mental image is conceived as if it were related to that of which it is the image (if there be any such thing) in

exactly the same way as the image in a looking-glass is related to that of which it is the reflexion ; in both cases there is identity of content, and the image in the looking-glass differs from that in the mind solely in respect of the fact that in the one case the other constituent of the image is 'glass' and in the other case it is consciousness. If the image is of blue, it is not conceived that this 'content' has any relation to the consciousness but what it has to the glass ; it is conceived *merely* to be its *content*. And owing to the fact that sensations and ideas are all considered to be *wholes* of this description—things in the mind—the question : What do we know? is considered to be identical with the question : What reason have we for supposing that there are things outside the mind *corresponding* to these that are inside it?

What I wish to point out is (1) that we have no reason for supposing that there are such things as mental images at all—for supposing that blue *is* part of the content of the sensation of blue, and (2) that even if there are mental images, no mental image and no sensation or idea is *merely* a thing of this kind : that 'blue,' even if it is part of the content of the image or sensation or idea of blue, is always *also* related to it in quite another way, and that this other relation, omitted in the traditional analysis, is the *only* one which makes the sensation of blue a mental fact at all.

The true analysis of a sensation or idea is as follows. The element that is common to them all, and which I have called 'consciousness,' really *is* consciousness. A sensation is, in reality, a case of 'knowing' or 'being aware of' or 'experiencing' something. When we know that the sensation of blue exists, the fact we know is that there exists an awareness of blue. And this awareness is not merely, as we have hitherto seen it must be, itself something distinct and unique, utterly different from blue : it also has a perfectly distinct and unique relation to blue, a relation which is *not* that of thing or substance to content, nor of one part of content to another part of content. This relation is just that which we mean in every case by 'knowing'. To have in your mind 'knowledge' of blue, is *not* to have in your mind a 'thing' or 'image' of which blue is the content. To be aware of the sensation of blue is *not* to be aware of a mental image—of a 'thing,' of which 'blue' and some other element are constituent parts in the same sense in which blue and glass are constituents of a blue bead. It is to be aware of an awareness of blue ; awareness being used, in both cases, in exactly the same sense. This element, we have seen, is certainly neglected by the 'content' theory : that theory

entirely fails to express the fact that there is, in the sensation of blue, this unique relation between blue and the other constituent. And what I contend is that this omission is *not* mere negligence of expression, but is due to the fact that though philosophers have recognised that *something* distinct is meant by consciousness, they have never yet had a clear conception of *what* that something is. They have not been able to hold *it* and *blue* before their minds and to compare them, in the same way in which they can compare *blue* and *green*. And this for the reason I gave above: namely that the moment we try to fix our attention upon consciousness and to see *what*, distinctly, it is, it seems to vanish: it seems as if we had before us a mere emptiness. When we try to introspect the sensation of blue, all we can see is the blue: the other element is as if it were diaphanous. Yet it *can* be distinguished if we look attentively enough, and if we know that there is something to look for. My main object in this paragraph has been to try to make the reader *see* it: but I fear I shall have succeeded very ill.

It being the case, then, that the sensation of blue includes in its analysis, beside blue, *both* a unique element 'awareness' *and* a unique relation of this element to blue, I can make plain what I meant by asserting, as two distinct propositions, (1) that blue is probably not part of the content of the sensation at all, and (2) that, even if it were, the sensation would nevertheless not be the sensation *of* blue, if blue had only this relation to it. The first hypothesis may now be expressed by saying that, if it were true, then, when the sensation of blue exists, there exists a *blue awareness*: offence may be taken at the expression, but yet it expresses just what should be and is meant by saying that blue is, in this case, a *content* of consciousness or experience. Whether or not, when I have the sensation of blue, my consciousness or awareness is thus blue, my introspection does not enable me to decide with certainty: I only see no reason for thinking that it is. But whether it is or not, the point is unimportant, for introspection *does* enable me to decide that something else is also true: namely that I am aware *of* blue, and by this I mean, that my awareness has to blue a quite different and distinct relation. It is possible, I admit, that my awareness is blue *as well* as being *of* blue: but what I am quite sure of is that it is *of* blue; that it has to blue the simple and unique relation the existence of which alone justifies us in distinguishing knowledge of a thing from the thing known, and indeed in distinguishing mind from matter. And this result I may express by saying that what is called the *content* of a

sensation is in very truth what I originally called it—the sensation's *object*.

But, if all this be true, what follows?

Idealists admit that some things really exist of which they are not aware: there are some things, they hold, which are not inseparable aspects of *their* experience, even if they be inseparable aspects of some experience. They further hold that some of the things of which they are sometimes aware do really exist, even when they are not aware of them: they hold for instance that they are sometimes aware of other minds, which continue to exist even when they are not aware of them. They are, therefore, sometimes aware of something which is *not* an inseparable aspect of their own experience. They do *know some* things which are *not* a mere part or content of their experience. And what my analysis of sensation has been designed to show is, that whenever I have a mere sensation or idea, the fact is that I am then aware of something which is equally and in the same sense *not* an inseparable aspect of my experience. The awareness which I have maintained to be included in sensation is the very same unique fact which constitutes every kind of knowledge: 'blue' is as much an object, and as little a mere content, of my experience, when I experience it, as the most exalted and independent real thing of which I am ever aware. There is, therefore, no question of how we are to 'get outside the circle of our own ideas and sensations'. Merely to have a sensation is already to *be* outside that circle. It is to know something which is as truly and really *not* a part of *my* experience, as anything which I can ever know.

Now I think I am not mistaken in asserting that the reason why Idealists suppose that everything which *is* must be an inseparable aspect of some experience, is that they suppose some things, at least, to be inseparable aspects of *their* experience. And there is certainly nothing which they are so firmly convinced to be an inseparable aspect of their experience as what they call the *content* of their ideas and sensations. If, therefore, *this* turns out in every case, whether it be also the content or not, to be at least *not* an inseparable aspect of the experience of it, it will be readily admitted that nothing else which *we* experience ever is such an inseparable aspect. But if we never experience anything but what is *not* an inseparable aspect of *that* experience, how can we infer that anything whatever, let alone *everything*, is an inseparable aspect of *any* experience? How utterly unfounded is the assumption that '*esse* is percipi' appears in the clearest light.

But further I think it may be seen that if the object of an Idealist's sensation were, as he supposes, *not* the object but merely the content of that sensation, if, that is to say, it really were an inseparable aspect of his experience, each Idealist could never be aware either of himself or of any other real thing. For the relation of a sensation to its object is certainly the same as that of any other instance of experience to its object; and this, I think, is generally admitted even by Idealists: they state as readily that *what* is judged or thought or perceived is the *content* of that judgment or thought or perception, as that blue is the content of the sensation of blue. But, if so, then, when any Idealist thinks he is *aware* of himself or of any one else, this cannot really be the case. The fact is, on his own theory, that himself and that other person are in reality mere *contents* of an awareness, which is aware *of* nothing whatever. All that can be said is that there is an awareness in him, *with* a certain content: it can never be true that there is in him a consciousness *of* anything. And similarly he is never aware either of the fact that he exists or that reality is spiritual. The real fact, which he describes in those terms, is that his existence and the spirituality of reality are *contents* of an awareness, which is aware of nothing—certainly not, then, of its own content.

And further if everything, of which he thinks he is aware, is in reality merely a content of his own experience he has certainly no *reason* for holding that anything does exist except himself: it will, of course, be possible that other persons do exist; solipsism will not be necessarily true; but he cannot possibly infer from anything he holds that it is not true. That he himself exists will of course follow from his premiss that many things are contents of *his* experience. But since everything, of which he thinks himself aware, is in reality merely an inseparable aspect of that awareness; this premiss allows no inference that any of these contents, far less any other consciousness, exists at all except as an inseparable aspect of his awareness, that is, as part of himself.

Such, and not those which he takes to follow from it, are the consequences which *do* follow from the Idealist's supposition that the object of an experience is in reality merely a content or inseparable aspect of that experience. If, on the other hand, we clearly recognise the nature of that peculiar relation which I have called 'awareness of anything'; if we see that *this* is involved equally in the analysis of *every* experience—from the merest sensation to the most developed perception or reflexion, and that *this* is in fact the only

essential element in an experience—the only thing that is both common and peculiar to all experiences—the only thing which gives us reason to call any fact mental; if, further, we recognise that this awareness is and must be in all cases of such a nature that its object, when we are aware of it, is precisely what it would be, if we were not aware: then it becomes plain that the existence of a table in space is related to my experience of *it* in precisely the same way as the existence of my own experience is related to my experience of *that*. Of both we are merely aware: if we are aware that the one exists, we are aware in precisely the same sense that the other exists; and if it is true that my experience can exist, even when I do not happen to be aware of its existence, we have exactly the same reason for supposing that the table can do so also. When, therefore, Berkeley, supposed that the only thing of which I am directly aware is my own sensations and ideas, he supposed what was false; and when Kant supposed that the objectivity of things in space *consisted* in the fact that they were 'Vorstellungen' having to one another different relations from those which the same 'Vorstellungen' have to one another in subjective experience, he supposed what was equally false. I am as directly aware of the existence of material things in space as of my own sensations; and *what* I am aware of with regard to each is exactly the same—namely that in one case the material thing, and in the other case my sensation does really exist. The question requiring to be asked about material things is thus not: What reason have we for supposing that anything exists *corresponding* to our sensations? but: What reason have we for supposing that material things do *not* exist, since *their* existence has precisely the same evidence as that of our sensations? That either exist *may* be false; but if it is a reason for doubting the existence of matter, that it is an inseparable aspect of our experience, the same reasoning will prove conclusively that our experience does not exist either, since that must also be an inseparable aspect of our experience of *it*. The only *reasonable* alternative to the admission that matter exists *as well as* spirit, is absolute Scepticism—that, as likely as not *nothing* exists at all. All other suppositions—the Agnostic's, that something, at all events, does exist, as much as the Idealist's, that spirit does—are, if we have no reason for believing in matter, as baseless as the grossest superstitions.

II.—KANT'S TRANSCENDENTAL IDEALISM AND EMPIRICAL REALISM.

By C. M. Walsh.

The terms Transcendental Idealism and Empirical Realism are incomplete. They have no meaning unless the objects be designated of which transcendental ideality and empirical reality are predicated. The term Empirical Realism might suggest that it predicates reality only of empirical objects. The term Transcendental Idealism would then, by analogous interpretation, imply that ideality is to be predicted only of transcendental objects. This is, in each case, a wrong disjunction of the component terms. The predication intended by Kant is not of ideality or of reality to transcendental or to empirical objects; but it is of transcendental ideality and of empirical reality, and the question is, to what objects these attributes are applied. They are intended by Kant to be applied to the same objects, spoken of in general as the objects of the senses, or more particularly, as the objects of intuition and of experience. Both the Transcendental Idealism and the Empirical Realism are meant by Kant to be in respect to Time and Space and to the Sensible Objects appearing in them, or in general, in respect to Intuitions and Phenomena. It would, however, be well not to use these terms simply, but to add to them the reference to the objects intended; for they may be applied to still other objects. Kant himself, conceiving of a world of things-in-themselves, whose existence he admitted, maintained a doctrine of Transcendental Realism in respect to Things-in-themselves; while at the same time he rejected a doctrine of Transcendental Realism in respect to Time and Space and the Sensible Objects or Phenomena in them.

Before examining the possible systems that may be framed by combination of these things, we must firmly grasp the meanings in which Kant used the four characterising terms. They are made to fall into two groups, in which each term

in the one is contrasted with a term in the other—transcendental with empirical, and idealism with realism. As by "empirical" is meant reference to what may be experienced, so by "transcendental" is meant reference to what cannot be experienced because of its being, or being taken to be, beyond experience, or outside the realm of experience, the idea of which, however, is supposed to underlie our experience. And as by "realism" is meant a doctrine of reality, so by "idealism" is meant a doctrine of unreality: the "ideal" is made to mean what is only thought of, not having anything to correspond to the thought, what is therefore falsely thought of, and is nothing; by "ideality" is meant nothingness. By "the transcendental ideality of phenomena," Kant tells us, he means merely that "outside our representations," *i.e.* transcendentally taken, "they are nothing".[1] In fact, for "Transcendental Idealism" Kant might equally well have employed the phrase "Unempirical Unrealism".

As these terms admit of being used interchangeably, and as they are applicable both to intuitions and phenomena and to things-in-themselves, it is possible to form of them eight combinations, descriptive of eight doctrines, although some of these may overlap and coincide. Four of them are doctrines held by Kant, and four are doctrines rejected by Kant. The four held by Kant are the following:—

(1) *Transcendental Idealism of Intuitions and Phenomena.*—That intuitions and phenomena are nothing beyond experience.

(2) *Empirical Idealism of Things-in-themselves.*—That things-in-themselves are nothing in experience (*i.e.* that they are not experienced).

(3) *Transcendental Realism of Things-in-themselves.* — That things-in-themselves are real beyond experience.

(4) *Empirical Realism of Intuitions and Phenomena.* — That intuitions and phenomena are real in experience.

The four rejected by Kant are the following:—

(5) *Transcendental Realism of Intuitions and Phenomena.*—That intuitions and phenomena are real beyond experience.

(6) *Empirical Realism of Things-in-themselves.*—That things-in-themselves are real in experience.

(7) *Transcendental Idealism of Things-in-themselves.* — That things-in-themselves are nothing beyond experience.

[1] III., 356, *cf.* 63, 68, 347.—The references are to volumes and pages of Hartenstein's chronological edition, in eight volumes, Leipzig, 1867-68. Vol. iii. contains the *Kritik der reinen Vernunft*, vol. iv., 1-131, the *Prolegomena*.

(8) *Empirical Idealism of Intuitions and Phenomena.*—That intuitions and phenomena are nothing in experience (*i.e.* have not objective reality).[1]

The fifth is rejected because it is contrary to the first, the sixth because it is contrary to the second, and so on. The second and third virtually overlap, since the reality of things-in-themselves beyond experience and their unreality in experience are mutually supplementary. Likewise the fifth and sixth may coincide, since the reality of phenomena beyond experience permits them to be things-in-themselves, while the reality of things-in-themselves in experience makes them into phenomena. The doctrines held and the doctrines rejected, then, each reduce to three. Kant himself used names for only three out of these six doctrines, and abbreviated. He spoke of the first merely as Transcendental Idealism, of the fourth as Empirical Realism, and of the eighth as Empirical Idealism, or simply Idealism.

The question before us is: Did Kant prove the doctrines he held, and did he disprove the doctrines he rejected? In the case of the fourth doctrine the question will be found to require investigation into the meaning of the doctrine itself.

At the very outset it may without hesitation be said that the doctrine of the Transcendental Ideality of Time and Space as intuitions and of Sensible Objects as phenomena in them, is not successfully established. Here at once an objection is to be set aside which was urged by some of the early critics. This is that even though Kant proved the subjective character of our time and space (their empirical reality), he does not prove that there cannot be an objective time and space resembling them—that there cannot be a transcendentally real time and space. The objection misses the mark because Kant attempts to prove, not merely the subjective character of our time and space, but their formativeness. Were time and space shown to be subjective merely as *modes* of the existence of our sense-objects and representations, there

[1] It may be noticed that the combination "empirical idealism," in each division, makes a break in the symmetry of the arrangement. In fact, it is somewhat forced, since there is no empirical nothingness and what is experienced is real, so that a new meaning is involved for the term "ideality". The combination is included because it was actually employed by Kant, even though, as we shall see, it was, in the last form, wrongly applied by him, the doctrine it denotes being ascribed to philosophers who did not entertain it. Kant sometimes called it (the eighth) "Material Idealism," which is a better term if it is confined to the denial of matter taken as any extended object outside us; for in the sense of matter as consisting of extended things-in-themselves, it would be a denial of what Kant himself denied.

would be no reason apparent why things existing by themselves might not have modes of existence *like* the modes of existence of the sense-objects which are only in us. There would be no justice in maintaining that the time and space of my sense-objects, which are supposed to resemble the time and space of your sense-objects, cannot resemble the time and space of things-in-themselves. In fact I cannot sensibly perceive your sense-objects, nor you mine, and yet all we mean when we say that your sense-objects are probably in a time and space like mine is that if I could sensibly perceive yours, or you mine, or if some one being could sensibly perceive both yours and mine, I, or you, or he would find them to be in like times and spaces. And so we do not know but that some being who could sensibly or otherwise perceive things-in-themselves, would find them to be in—or to have in and between themselves—a time and space like ours. But Kant does not stop at this position. He does not say that our time and space are modes existing in our sense-objects only after and because these exist. He recognises, to be sure, that he *finds* his own time and space only in his sensible objects after he has them.[1] Yet he maintains that his time and space are distinctive forms (or moulds) existing in him prior to his having any sense-objects, hence independent of his sense-objects, and that the existence of his sense-objects, as successive and extended things, is consequent to, and dependent upon, the existence of his forms, time and space. From this doctrine it would result that things-in-themselves could not be in any time and space, but could at best only have some time and space in them, just as my time and space are in me as a subject-in-myself, so that they would be merely other subjects-in-themselves (or monads). For it would be absurd to suppose that a thing existing by itself, as an entity self-contained, could exist in something like something existing in a subject-in-itself as a form of its representations or modifications. This reasoning, however, does not apply to things conceived of merely as "transcendental objects" relatively to us; for such objects might exist in a time and space, themselves forms in another being, say God, as maintained in the Berkeleyan system. A time and space like our formative times and spaces could, of course, be objective to all of us, existing apart from all men, but only by residing in another percipient Being. And transcendental objects need not be things-in-themselves, strictly so called, although Kant does not appear to have recognised this distinction;

[1] III., 33, 243, 322 n.

for transcendental objects to us may be attributes or determinations, whether modal or formal, of, or residing in, things-in-themselves. Thus if Kant succeeded in proving his complete doctrine about the nature of our times and spaces, he would have proved their transcendental ideality, if not relatively merely to us, yet relatively to all percipient beings, that is, absolutely. He would have proved the nothingness of time and space outside percipient beings or things-in-themselves—the non-reality of any absolute time and space—the falsity of the opinion that time and space are independent, or self-dependent, existences. It is incumbent upon us, therefore, to show that he did not succeed in proving his complete doctrine.

In the "Metaphysical Exposition" Kant gives four arguments purporting to prove his doctrine. These fall short of proving his complete doctrine; for the last two aim only at proving that time and space are intuitions, and the first two only at proving that they are *à priori*—which two are also very defective. At proving the formativeness of time and space, or their prescriptiveness concerning the nature of the objects appearing in them, no argument is directed except the "Transcendental Exposition" in the Aesthetik, which corresponds to the "Transcendental Deduction" in the Analytik. These together form the epistemological argument, to the effect that the hypothesis of their formativeness is necessary for the possibility of our sciences of applied mathematics and physics, on the ground that in no other way than by the existence in us of the forms and principles prescriptive of the nature of our objects could we have certain knowledge of them, such as we claim to have; whereby also is involved the conclusion that the objects dealt with must also be in us, for only in this case could their forms and principles or laws be in us. There are many defects in this argument. To enter into a criticism of it in detail is beside the purpose of this paper, which is expositive. But a destruction of it will be attempted by pointing out an inconsistency in the doctrine which this doctrine prepares; for Kant's Transcendental Idealism is nothing without supplementation by his Empirical Realism.

The inconsistency here alluded to is not in two out of the three branches of Kant's metaphysical system. The doctrine of Transcendental Idealism in respect to Time and Space and the Sensible Objects in them is a perfectly self-consistent and conceivable doctrine. We can perfectly well think that there is no time or space apart from the intuitive faculty in percipient beings—that time and space are neither

things nor attributes of things existing apart from such a faculty—that there is no *Gegenbild* of time and space (iii., 608), and consequently none of phenomenal objects, existing "in the same manner" (iii., 570), or "in the same quality" (iii., 607, 608), outside, by themselves.[1] Also, in spite of all Berkeleyans, we can perfectly well think of the existence of things beside percipient beings and their representations; wherefore we may perfectly well entertain a system of Transcendental Realism concerning them. For entirely consistent with itself and with the preceding is the conception that there may be a world of things existing by themselves, not in time and not in space, either themselves or their "determinations" or "manners of existing," about which therefore we are not able to know or even to conceive what they may be in detail, whether we happen or not to be able to know or to believe that they exist. We can, furthermore, think of them as interacting and as acting upon our subjects - in - themselves; for ourselves, by abstracting our faculties and their contents, may be regarded as similar things-in-themselves. The concept of causality applied to these is not the concept of causality which Kant applied to our sensible objects and defined as the positing of something preceding as condition of something following, since this is applicable only to events taking place in time. That kind of causality he called the sensible, phenomenal, or empirical. The kind which is applicable to things-in-themselves he called the intelligible, noumenal, or transcendental.[2] So it is conceivable that the objects-in-themselves may cause in me (a subject-in-itself) my sensations, which I distribute into a spatial and temporal and orderly world of phenomena; and similarly they may cause in you your sensations, which your subject-in-itself distributes into an extended and temporal and orderly world of phenomena, and so on in every individual person, every one of whom would have his own subjective world of phenomena, and the only objective world, common as object to all individual persons, would be the one world of things-in-themselves. To imagine what may be the conditions or states in that world corresponding to the extended and succeeding states in our phenomenal worlds is impossible, for the very reason of their total differentiation from our representations; but simply to think

[1] Rather that our time and space and the objects appearing in them are not *Gegenbilder*, or mirrored images, of a real time and space and of real things existing in them.

[2] III., 349, 374, 377, 378.

that other corresponding states may exist is at least possible. But this thought does not constitute Kant's Empirical Realism; for there is nothing empirical about such realities. They are not objects in our experience, and so, in a way, as Kant says, they are not objects for us,[1]—and he even says they are nothing for us,[2] though by this statement he does not mean that they are absolutely nothing. On the contrary, if existing, they are the absolute realities, the term "reality" here being used not in an empirical but in a transcendental sense. In other words, this is the doctrine of Transcendental Realism in respect to Things-in-themselves.[3]

These two transcendental doctrines, then, are perfectly consistent, each with itself and each with the other. The one means that transcendentally taken, that is, outside of ourselves, sensible objects do not exist, and there are no objects resembling them. The other means that in that outer region, though there may be objects corresponding to our sensible objects, they do not resemble them in any particular whatsoever, so that their nature must be wholly unknowable to us. The two fit together perfectly. But it cannot be said that Kant's empirical doctrine—his doctrine of Empirical Realism in respect to Time and Space and the Sensible Objects in them—is self-consistent, or altogether consistent with those others. It is a fact which has been mostly overlooked, that Kant gives two distinct accounts of this Empirical Realism. These deserve to be carefully distinguished.

Empirical Realism deals with the empirically and phenomenally real, or the reality in experience or in phenomenon. Of such reality Kant gives, and frequently repeats, all unconsciously, two totally distinct definitions. The one is that the phenomenally real *is* the matter of our sense-perceptions, or simply our sensations themselves; the other, that the phenomenally real is that which *corresponds to* the matter of our sense-perceptions, or simply *to* our sensations.[4] The

[1] III., 399.

[2] III., 350, 571; iv., 84.

[3] A doctrine of this sort, but confined to the consideration of space, and also not positively but problematically stated, had been advanced twenty-seven years before Kant wrote the *Kritik*, by Condillac in his *Traité des Sensations*, part iv., ch. v. Condillac, as well as Kant, drew from Leibnitz.

[4] The second is the more common, as in iii., 144, 158 n., 160, etc. The first is given along with the second in the following: "Alle äussere Wahrnehmung also *beweiset* unmittelbar etwas Wirkliches im Raume, oder *ist* vielmehr das Wirkliche selbst," iii., 602, and the last is repeated on the same page. Now in Wahrnehmung is both intuition and sensa-

importance of the distinction, the moment attention is called to it, is obvious. Our sensations, and consequently, too, the matter of our sense-perceptions, exist only in our sensibility, and have no existence when we do not perceive them.[1] But that which corresponds to them is distinct from them, and does not necessarily cease to exist when we do not sensibly perceive it through the medium of the sensations it excites in us. In accordance with these differing definitions Kant represents Empirical Realism in two different ways, of the distinction between which he likewise does not appear to have been clearly conscious.

In general, sensible objects, whether taken for representations in me or for objects corresponding to such representations, are regarded by Kant as (phenomenally) real which I, awake, and in possession of all my faculties, in a normal state, experience. The justification for calling these real is that we find that other men have similar experiences and there is possibility of intercourse on the supposition that we are experiencing the same objects, so that these objects are "objective," *i.e.* are objects for all men in common. There is little room here for divergence of doctrine, unless it be in regard to the use of the term "same" applied to the sensible objects of different persons, for which it may be contended we ought in strictness to substitute the word "like". The divergence is first and most plainly noticeable in dealing with things of which we do not happen to have, or possibly cannot have, actual sense-perception, such as the walls of this room when my eyes are shut, or the centre of the earth, or the historical person Cæsar, or the things in the world before the appearance of man, which we yet think of as real objects and distinguish from imaginary objects, such as chimeras, or from objects in our dreams. The difference, first being noticeable in dealing with the unexperienced real objects, becomes apparent later also in dealing with the real objects which we actually experience and while we experience them. The doubleness, then, of Kant's Empirical Realism

tion, iv., 57, and the latter is the empirical, iv., 32, so that empirical reality could only be the latter and not the whole Wahrnehmung. Thus he says *sensatio* is *realitas phænomenon*, iii., 146, and again: "In aller Erfahrung muss etwas empfunden werden, und das ist das Reale der sinnlichen Anschauung," iv., 370.—He even gets the same difference into the matter of Erscheinung and of Wahrnehmung, defining it both as *being* sensation itself, iii., 72, 159, 195, etc., and as *corresponding to* sensation, iii., 56, 483, or as being an object of sensation, iv., 370.

[1] *Cf.*, "Das Reale äusserer Erscheinungen ist also wirklich nur in der Wahrnehmung und kann auf keine andere Weise wirklich sein," iii., 602.

is most apparent in his treatment of unexperienced real phenomenal objects. Now, one of his two treatments of such objects may be expounded as follows; for so the case seems to have presented itself to him.

Objects such as the walls of this room, which I now actually see or feel, exist only as phenomenal objects in my sense-perception; for they vanish the moment I shut my eyes or walk away. Ceasing to exist when I do not sensibly perceive them, they have no existence apart from my sense-perception of them—they are objects only in my sensibility. If, then, there is any object existing unaffected by my action, or by the action of other percipient beings, it is only the unknown, never sensibly perceived "transcendental cause" of the phenomenal wall I did sensibly perceive, the "transcendental object" or, may be, the thing-in-itself, which latter, however, according to the above-described Transcendental Idealism and Transcendental Realism, does not exist in space and time, and is not a sensible object for me even when I am beholding the phenomenal wall. While my eyes are shut, I may *imagine* the walls to be where they were when I saw them, and also *think* of them as being there; but they are not really there, since the thing-in-itself is nowhere, and the phenomenal object has vanished, and my imaginary wall is not real (for, while somebody else was watching it, the wall may have tumbled down, although I still continue to imagine and to think of it as standing). Yet while I have no reason to think (to believe) that the object, which others may be experiencing, and which I might experience if I chose, has changed, I continue to speak of the object as if I were still experiencing it, that is, I treat my imaginary wall as a real phenomenal wall because I judge it to be a sufficiently accurate representation of the real wall which I should, I think, the while be experiencing, had I kept my eyes open. Thus this imagining is clearly distinguished from the mere imagining of fantastic shapes and events, or from dream-pictures, which I have no reason for believing to be correct representations of any objects which I or others could experience. Such are objects produced in the minds of some men, with no reason for supposing them to be directly caused by any corresponding transcendental object, —they are merely subjective. As for past events, or distant or minute objects, I may similarly think my imaginary objects (which I have formed from hearsay or from history, or by arguing from effect to cause) to be correct representations of objects which I should have experienced had I been there and then, or which I could experience had I more powerful

or finer sense-organs, or in general, as Kant expresses it, which I could reach "in a possible extension of [my] experience" (iii., 348). Such objects likewise are not phenomenally real (or actual) objects (or objects for me), since I have no actual experience of them, and, too, they may be objects that have not been experienced by anybody. They are, however, treated as phenomenally real objects because of this possible connexion between them and my present experience,—because they are believed to be experienceable objects that have been, or would have been, or would be, experienced under proper conditions.[1] But if there is any real object apart from the mere series of my possible experience, or of the possible experience of other percipient beings—any real objects that exist independently of such experiences or their possibility,—this, too, can only be the transcendental object (either a thing-in-itself, or an attribute of a thing-in-itself). Kant, however, conceived of such transcendental objects only as things-in-themselves; and therefore he could speak of such an object even of a past phenomenal existence only in the present tense of general time as the nearest approach to expressing no time (as when we say the sum of two and two *is* four); for according to his transcendental doctrines not only the things-in-themselves but their "determinations" or "manners of existing" do not exist in time and cannot be past any more than present. The peculiarity of all this way of viewing the reality of unexperienced phenomenal things is that such things are regarded as real only so far as we consider that we could experience, or could have experienced, them, although they are admitted not to be real (or actual) when, while, or if not experienced. "The objects of the senses," says Kant, "exist only in experience" (iv., 89); and applying to these objects the term "phenomena," he similarly says that "phenomena cannot, as such, exist outside us, but they exist only in our sensibility" (iii., 583). When not existing in anybody's actual experience, they must be thought of merely as potentially real, though Kant never used this expression. And as for the objects of the senses that exist in my experience, evidently *these* cannot exist in anybody else's experience. The real sense-objects of different individuals are distinct. Distinct also are their spaces, their times, their consciousnesses, their experiences, their phenomenal worlds. The only common objects, really the same for two or more

[1] *Cf.* what is practically the definition of "wirklich" in the second Postulate iii., 193, which is frequently repeated.

persons, are the transcendental objects, taken by Kant for things-in-themselves, out of any person's experience, but cause of the many (supposedly similar) representations in many persons' experiences. This last is not clearly expounded by Kant. But the general conception of the phenomenally or empirically real, as here explained, is to be found, with somewhat of elaborateness, though not wholly free from admixture of the other conception, in the sixth section of the part of the Dialektik dealing with the Antinomies; and it is employed by Kant throughout his solution, or dissolution, of the first two Antinomies.[1] It has been described here first because it is the only way in which Kant's Transcendental Idealism and his treatment of time and space as forms of sensibility, consequently as peculiar to each individual, properly allowed him to treat them.

This doctrine, let us notice, is perfectly consistent with the two transcendental doctrines already described. In fact, it is little else than a *résumé* of them, except for the drawing of the distinction between real sense-perception and imagination or dreaming. According to it the empirically real is only either the by us experienced or the by us experienceable. Outside the possible range of our experience our sensible objects do not exist—they are transcendentally ideal. Outside the possible range of our experience the only objects that exist, exist in ways totally distinct from the ways in which our sensible objects exist. As such real transcendental objects do not resemble our real empirical objects, and cannot be sensibly perceived, they cannot be said to have empirical reality. They have only transcendental reality.

Beside this consistent Empirical Realism Kant has another Empirical Realism that is not so consistent, either with itself or with the other two doctrines. He has another way of treating the unexperienced real phenomenal objects—those objects which because unexperienced are not phenomenal to me, and possibly are not and never have been or never shall be phenomenal to anybody, and which yet are real because they are experienceable. This other treatment he brings about through a lack of definition and a slurring over of distinctions that ought to be recognised, which we find both in his treatment of time and space in the Aesthetik and in his treatmeat of experience in the Analytik. Kant gener-

[1] *Cf.* "Eine rohe Unterscheidung der *Sinnenwelt* von der *Verstandeswelt*, davon die erstere nach Verschiedenheit der Sinnlichkeit in mancherlei Weltbeschauern auch sehr verschieden sein kann, indessen die zweite, die ihr zum Grunde liegt, immer dieselbe bleibt," iv., 299 (*Grundlegung zur Metaphysik der Sitten*).

ally speaks of time and space simply, or at most of "our" time and space, without confining himself to *his* time and space—that is, in the first person, to *my* time and space. Now, as the unity of the forms of the sensibility is a cardinal feature in Kant's doctrine of time and space, by the slurring of the distinction between individuals—of the fact that *my* sense-objects are not *your* sense-objects, *my* forms of my intuition of those objects not *your* forms, and conversely, however much they may resemble each other,—Kant comes to speak simply of *one* time and of *one* space, as though there were one time and one space the same for all men (instead of there being as many distinct though similar times and spaces as there are distinct persons). Likewise the unity of experience is a cardinal feature in his doctrine of experience, so that by leaving off the restriction to individuals he comes to speak of *one* experience,—and even, we may add, he goes so far as to speak of *one* consciousness. And as a consequence from all these, he ends by speaking of *one* phenomenal world and of *one* nature.[1] In this view an unexperienced phenomenal object, such as the wall of my room when my eyes are shut and nobody else is sensibly perceiving it, is simply taken for an object of this one experience, existing in this one phenomenal world, subject to the laws of this one nature, extended in this one space, enduring or passing in this one time—in short being a representation in this one consciousness. And past things, of course, are not, but were, real phenomenal objects in the one experience, one world, one space, one time, one consciousness, even though no individual human being or terrestrial animal ever sensibly perceived them or so much as thought of them. In this conception our real phenomenal objects are even more clearly than in the preceding distinguished from our merely imaginary objects

[1] "Es ist nur *eine* Erfahrung, in welcher alle Wahrnehmungen als im durchgängigen und gesetzmässigen Zusammenhange vorgestellt werden; eben so, wie nur *ein* Raum und Zeit ist, in welcher alle Formen der Erscheinung und alles Verhältniss des Seins oder Nichtseins stattfinden," iii., 574. "Es ist *nur eine* Zeit," 173. He speaks of "die einige allbefassende Erfahrung," 399; and of the Analogies as exhibiting "alle reale Verknüpfung in einer Erfahrung überhaupt," 196, *cf.* iv., 58, 68, and 359 (*Metaphysische Anfangsgründe der Naturwissenschaft*). "Alle Erscheinungen liegen in *einer* Natur und müssen darin liegen," iii., 191, *cf.* 376. "Nimmt man die reine Anschauung des Raumes, so wie dieser . . . nur ein Raum ist; so sind dadurch alle Substanzen . . . verbunden und machen ein Ganzes aus, so dass alle Wesen, als Dinge im Raume, zusammen nur eine Welt ausmachen," viii., 545-546 (*Ueber die Fortschritte der Metaphysik*), *cf.* iii., 208. For the one consciousness see iv., 49, 53, 66.—Kant does, however, sometimes distinguish between the distinct times of different persons, as in iii., 594-595.

and from our dreams; for these latter exist only in the individual, are only "subjective," but the former exist also in the single experience, world, time, space, consciousness, outside every individual man, are "objective" in both the senses of being alike for all men and of being objects distinct from the individual subject's representations of them. Unexperienced real phenomenal objects are no longer merely experienceable objects; they are actually experienced in the one consciousness, they are real objects in the one experience. And now two or more men may be literally said to sensibly perceive the same thing; for though their representations of it are distinct, yet the object can be the same, being a single outside thing in the one phenomenal world. Thus the same object of many men's many representations is no longer merely the transcendental object or thing-in-itself, but it is a phenomenal object, and yet outside us in an outside space and time, and corresponding to (and resembling) the many representations in the many men.[1] Still, in Kant's opinion, such outside objects are not transcendental, but are empirically real, because they are objects in an experience, although we should have to regard them as transcendental so far as they are supposed to be outside of human experience.

The holding of this realism is facilitated, if not induced, by the ambiguous use of two terms. The first of these is the term "outside me" employed in connexion with the terms "outer" and "extended," and, by contrast, with "inner" and "inside me". In the terms "outer" and "outside me," used interchangeably, Kant admits two distinct meanings. On the one hand he refers to anything extended in space (having parts outside parts), and on the other to anything existing as a transcendental object, independent of me, whether in space or not. This doubleness of meaning he pronounced "unavoidable," yet sought to avoid it by calling the former "empirical outsideness" and the latter "transcendental outsideness".[2] Now the objects empirically outside me he views as still inside me, because extended things that are objects for me are in my space, which is in me (*cf.* iii., 599). Thus a distinction arises also in the terms "inner" and "inside me"; for, in contrast with the preceding, Kant applies these terms to empirical objects that

[1] *Cf.* "Das Dasein der Gegenstände im Raum ausser uns" and "ausser mir" in the Widerlegung des Idealismus in the 2nd ed. of the *Kritik*. Also: "In so fern ist also der empirische Realismus ausser Zweifel, d.i. es correspondirt unsern äusseren Anschauungen etwas Wirkliches im Raume," iii., 602 (1st ed.).

[2] III., 600-601; *cf.* 603-604; iv., 84-85.

are not extended in space but are only successive in time, such as my thoughts and feelings or emotions, and then also allows them, in a wider sense, to cover objects extended in space, since these are also successive in time. There is here a doubleness in the use of terms within the field of experience itself, which Kant in no wise tries to avoid, but rather turns to his account. For now many of our empirical objects can be described both as outside us and as inside us. This use of language could easily be avoided by refraining from speaking of *extended* objects as objects "outside me," which expression is highly improper, because, so applied, it has no meaning whatever, since the "me" here spoken of is not an object extended in space (for by "me" Kant cannot be referring to my body), and things outside one another in space are not outside anything not in space (except transcendentally, which is a manner not now under consideration). But by using this expression as synonymous with "extended" Kant does not make merely a confusion in the use of words. He makes also a confusion in thought, concerning the actual relationship of extended objects to the percipient subject. For he evidently has in mind the fact that objects extended in the one space the same for all men would be outside the spaces that are peculiar to individual persons, and therefore would be really outside me, as well transcendentally as empirically. Yet their transcendental outsideness he is able to ignore because of their empirical outsideness (their being extended in some space) and because of their empirical insideness (their being successive in time). And so by placing objects extended simply "in space," indefinitely, also in me, he gets all the advantages of treating merely of objects "in me," —objects wholly within my power, of which I can have consciousness, and about which I can know everything there is to know, since nothing can be there but what I am conscious of as being there. Thus in the first edition of the *Kritik*, when trying to find a paralogism in the position of the so-called Empirical Idealists, there described as merely doubting the existence of outside things because of inability to prove it demonstratively, he maintained that no proof is needed because we have direct consciousness of the existence of outside things. Really the paralogism is in Kant's own position. He is trying to make out that the Empirical Idealists were surreptitiously transforming their proper doubt (or admission of want of certainty) about the existence of things outside us transcendentally into an improper doubt about the existence of things outside us empirically (*i.e.* about the existence of merely extended objects or representations)—

which nobody has ever done. But he himself the while, in claiming that we have direct consciousness of empirically outside things in the sense merely of extended things (representations in us individually), is really also claiming that we have direct consciousness of extended things outside us universally, things only corresponding to the extended representations in us individually. But such things really are transcendentally outside us, although they are supposed to resemble our representations and are not taken to be things-in-themselves out of space altogether; for he is maintaining that they are in a space and in a consciousness—without, however, making it plain in what space or in whose consciousness they are. Then when he came to republish the *Kritik* he seems to have had an inkling of the unsatisfactoriness of this reply, for he omitted it and substituted elsewhere an argument—the so-called Refutation of Idealism. Thus he now attempts to give a proof of what he before thought to need no proof. His argument is that my consciousness in general of things inside me (including extended representations), or of myself, is an indication of the existence of extended things outside me, on the ground that my consciousness of the former, because of its positing something permanent in sense perception[1] which cannot be in me (although he finds it in space and puts space in me), would not be possible without the existence of the latter. And he now omits to notice even so much as the distinction he had noticed in the first edition, and speaks quite indefinitely of the "objects in space outside me". He does not see, or does not want it to be seen, that either, if he is trying to prove the need of the existence merely of extended objects, the argument is useless, since of these we do have direct consciousness; or, if he is trying to prove the existence of objects in a space outside me distinct from the space in me, objects of which I do not have direct consciousness, he might just as well have made this a proof of the existence of objects outside me indefinitely, that is, of objects admitted to be transcendental, since also here nothing is introduced into the argument to show that the outer objects must be in space. Where Kant attempted to prove this was in the First Analogy; and there what he aimed at proving was that there must be a "substance in phenomenon," a substratum of all change which itself remains unchanged,—which substance indeed he took to be extended in space, the only argument for this being the general epistemo-

[1] This rests on the Proof of the First Analogy.

logical argument, which is the characteristic of Kant's "critical" philosophy, but which can be satisfied only by placing space as well as time in me, and therefore cannot properly be applied to a space outside me, except by confusing this with the space inside me.[1] In the Refutation, however, the reference to a "space outside me" is plain, with its necessary implication of a space outside my space, since my space is in me. And here towards the end of the Analytik in the second edition this second account of Empirical Realism is employed throughout. This is an improvement upon the treatment in the first edition in the Dialektik, where the first account of Empirical Realism was the only one avowedly employed (*i.e.* in the argument or first assertion), though he ran off into the second whenever he could escape into it (in the conclusion or restatement).[2]

[1] The argument in the Refutation was directed at proving merely this: "Also ist die Wahrnehmung dieses Beharrlichen [in der Wahrnehmung] nur durch ein *Ding* ausser mir und nicht durch die blose *Vorstellung* eines Dinges ausser mir möglich"; and the argument in the First Analogy only sought to prove that in the Gegenstände der Wahrnehmung (and consequently in the Dinge ausser mir) there must be something permanent, their substance. In both cases it is only by means of the confusion of taking *Ding ausser mir* as equivalent to *Ding im Raume*, or extended thing, and of placing it both in me and out of me, that the ultimate conclusion desired is reached. In earlier issues of MIND, Kant has been accused by Mr. Balfour of having in his Refutation confused "being in space" with "being outside the mind and other than one of a series of conscious states," vol. iii., no. 12 (1878), p. 498; and by the late Prof. Sidgwick, replying to a defence by Prof. Caird, of having confused "externality in space" and "externality to consciousness," vol. iv., no. 15 (1879), p. 410. But really in this passage Kant made no allusion at all (as he had done in the omitted passage in the first edition) to externality to consciousness (of the things-in-themselves), and his confusion was between two kinds of externality in consciousness—between externality in the sense of extension in space in me and externality in the sense of existence in a space outside me, and outside every one else, and yet, according to his doctrine, somehow in some one consciousness, and still empirical even to me, instead of transcendental (like that of things in themselves). Outer objects in this space, we shall presently see, are treated as intermediate between the extended objects (in this sense "outside me") which are wholly in me (my extended modifications or representations), and the objects (not extended) which are wholly outside me (the things-in-themselves). Without recognition of the *threefold* use of such terms as "object," "outer," and many others (*two* of the meanings being taken as empirical, although only one is wholly so), it is impossible to understand Kant, and to make one's way through the maze of his verbiage.

[2] The greater emphasis laid upon the second kind of Empirical Realism in the second edition was no doubt due to desire to avoid the criticism of "Idealism" (the eighth in our list) which had been brought against him after the publication of the first edition, as may be seen by consulting the intervening *Prolegomena*.

The other ambiguously used term which helps is the word "phenomenon". This may mean both the appearance of a thing and the thing which appears. Thus my representation, only in me, of a wall outside me, is an appearance or phenomenon of the wall outside me; but also the wall outside me may itself be called a phenomenon because it appears to me through the medium of its representation or appearance in me. Then because the wall outside me is a phenomenon in this one sense of the term, it is easy to take it as a phenomenon in the other sense, that is, as an appearance or representation of still another thing outside, which is the thing-in-itself. To be sure, this other thing could be treated in the same way, and so on without end. But in such sequences there is a tendency to be satisfied with three terms, which furnish a beginning, middle and end. Such is the use Kant makes of the word.[1] The thing-in-itself and the representation he held resolutely apart. But between them he put a something which he called a phenomenon (and also even a representation), to which he gave the nature of both—that of the thing-in-itself by making it a distinct outside object, and that of the representation proper by treating it as the representation of something else and by putting it also in us. The intermediary character of the objects which Kant calls real phenomena, according to this one of his two ways of conceiving of empirically real things, calls for especial attention. Our individual worlds are wholly subjective, the world of things-in-themselves is wholly objective, but this world of outside phenomena is both subjective and objective.[2] Again, the objects in our individual worlds have both the primary and the secondary qualities; things-in-themselves, according to the Transcendental Idealism, have neither the primary nor the secondary qualities; but these outside phenomena in the one phenomenal world have the primary but not the secondary qualities.[3] And because of this intermediary nature of phenomena Kant was able,

[1] The three are mentioned together in iv., 37: (1) "Vorstellungen welche ihr [der Körper] Einfluss auf unsere Sinnlichkeit uns verschafft"; (2) "Dinge, . . . denen wir die Benennung eines Körpers geben, welches Wort also blos die Erscheinung . . . bedeutet"; (3) "jener unbekannte aber nichts desto weniger wirkliche Gegenstand".

[2] *Cf.* iii., 74, where rain-drops are allowed, physically understood, to be things-in-themselves, *i.e.* objective things, compared with the rainbow (or with colours); but compared with the things-in-themselves proper, they are said to be only modifications in us, *i.e.* subjective. (See also 64.)

[3] *Cf.* the preceding, and see also iii., 63 n.; iv., 38; viii., 529 (*Ueber die Fortschritte der Metaphysik*).

whenever it pleased him, to treat them merely as representations (as in the first account above given of Empirical Realism),[1] and then again to class them with the things-in-themselves as substances (or as containing substances), but with the distinction that they are "phenomenal substances" (the last subjects of existence in space, forever enduring in time), while things-in-themselves are "noumenal substances" (the last subjects of being in general).[2] Indeed he avows that he treats phenomena as having two sides, the one as the object-in-itself is considered, the other as its appearance in the subject is sought after;[3] and, more generally, he proclaims his teaching to be that an *object* is to be taken in two meanings, as phenomenon or as thing-in-itself.[4] And thus treating phenomena as aspects of things-in-themselves, he puts phenomena in the place of things-in-themselves, and so is able, in physics, to get along without concerning himself about the latter.[5]

There is still another bit of equivocation that runs parallel with the ambiguity in the Empirical Realism, and abets it. This can hardly escape the attention of any one who follows the fortunes of the Analogies throughout the rest of Kant's work after he has in the second book of the Analytik satisfactorily to himself set them up as proved principles or laws of the understanding. In the Analytik itself was introduced the distinction between constitutive and regulative principles. Still, before coming to the practical philosophy, which deals with regulative principles only, we are given to understand that that distinction applied only in reference to intuition and that as regards experience (and consequently as regards the phenomenally real) they are, all of them, constitutive (iii., 448). Yet so quickly as in the very next part of the work, the Dialektik, the constitutive principles are frequently treated as nothing better than regulative principles, though

[1] *E.g.* "Erscheinungen, d.i. blose Vorstellungen," iii., 346-347; and frequently so.

[2] IV., 394; less fully, iii., 215 n. For the epithets see iii., 234, *cf.* 170.

[3] III., 70; *cf.* 374.—Similarly in the case of the subject, he allows one and the same subject to be treated both as phenomenon and as thing-in-itself, iii., 375; iv., 92; v., 102, 120; vii., 453; viii., 530-531.

[4] III., 23; *cf.* 78.—Accordingly it was indifferent to him whether he said we are in our "outer sense" affected by outside phenomena, through motion, *cf.* iv., 366, or by things-in-themselves, iii., 592; iv., 63, 66, 299; vi., 35, without motion, iii., 609. Generally, however, he said merely we are affected by objects, iii., 33, 55, *cf.* 82, etc.

[5] "In allen Aufgaben, die im Felde der Erfahrung vorkommen mögen, behandeln wir jene Erscheinungen [die äusseren] als Gegenstände an sich selbst, ohne uns um den ersten Grund . . . zu bekümmern," iii., 612; and similarly 64, 234; viii., 538.

they are still also retained as constitutive. The second Analogy is the most important. This we find even converted into a "regulative principle of the reason," to the effect that in the search after natural causes for any given phenomenon we can never stop at any first natural cause, but, however far back we go, must always regard the cause we reach as still an effect demanding search for a further cause (387). Yet, as originally enunciated in the Analytik, and as again repeated on the very next page after what has just been quoted, the second Analogy was a principle stating as a truth that every phenomenon *has* a preceding phenomenon for its cause. From this constitutive principle—for it certainly is expressed constitutively—it follows analytically and apodictically that the series of preceding causes must be without a beginning, must be infinite,—and "uneingeschränkt" (388) and "nirgend geendigt" (389) Kant calls it, though he avoids the term "unendlich" except in connexion with the principle taken regulatively (as on 423). Now this constitutive principle, as thus established and held (taken to be true), fits in only with the second kind of Empirical Realism as above described, because it asserts that *every* phenomenon, hence also *my first* phenomenon, has a preceding phenomenon for its cause; but my first phenomenon cannot have a preceding phenomenon in me for its cause, and its cause can only be a phenomenon outside me. Nor can its cause be supposed to be a phenomenon entirely in somebody else; for that would be absurd in itself, and would break the alleged continuity in the series of actual causes. It would also involve the position that there never was a first man or first animal, but that the succession of living creatures has been from eternity; which Kant repudiated (359-360). Then the only phenomenon causing my first phenomenon, or causing the first phenomenon in the first living and percipient being, must be a phenomenon simply as a phenomenon, in the One world,—or in the One consciousness. And the only place for the unlimited series of phenomena in the never-begun chain of events is the One phenomenal world in general, or the One consciousness. But if the first-described account of Empirical Realism be adhered to, then only can the regulative principle be held; for this alone fits that theory, asserting as it does that so far as we go in the search after preceding causes so far we must regard the phenomenal reality as going, but not asserting that the phenomenal reality goes any farther —nor even that it goes so far.

III.—THE PHYSIOLOGICAL FACTORS OF THE ATTENTION-PROCESS (III.).

By W. McDougall.

Muscular Activity as a Factor of the Attention-Process.

That motor activities play a part of some importance in the attention-process is now pretty generally admitted, and this general statement needs no further proof. But I have to report in this section some observations that seem to afford more direct evidence of this influence than has yet been produced and to throw some light upon the way in which this influence is exerted. Most of the experiments to be described in this and the following sections deal (1) with the phenomenon described by me in a former paper[1] and there called 'the complete fading of visual images'; (2) with the fadings and reappearances of after-images; (3) with the alternations of colours and contours in the struggle of two different visual fields presented to the two eyes; (4) with the alternations of different modes of perception of ambiguous figures such as those reproduced in figures 7 and 8 on pages 482 and 483 and in figure 2 of the first part of this paper.[2]

It will probably be said by any reader, who may have had the patience to follow my disquisition up to this point, that these phenomena, with the exception of those of the last group, have little or nothing to do with Attention. I will therefore indicate at once the general purpose of my observations and the line of the argument that I found upon them. These four groups of phenomena have one striking feature in common, namely, that while the physical stimuli affecting the sense-organ remain unchanged or undergo only slow and gradual changes, the affections of consciousness to which they give rise undergo very marked and rapid changes. My

[1] Mind, No. 37. [2] Mind, No. 43, p. 335.

aim is therefore, in the first place, to show that the physiological changes underlying these abrupt changes of consciousness are essentially similar in character in all these groups of cases, for to do this is to justify the scheme of the physiological processes underlying the states and the movements of attention that was outlined in part i. of this paper. Secondly, assuming the essential similarity of the physiological processes in all these varieties of phenomena, I have studied the simpler varieties because it seems probable that, if we can gain insight into the physiological processes in these simpler cases, we shall at the same time gain insight into those underlying the true states and movements of Attention, and in fact into the physiology of mental activity in general. I have studied especially the effects upon these allied processes (1) of activity of the muscles of the sense-organs, (2) of fatigue, (3) of reenforcement by the idea (including under this vague phrase the effects of voluntary preperception or expectation), and (4) the evidences of reciprocal inhibitions.

As regards the influence of activity of the eye-muscles upon the complete fading of a steadily fixated image, I have not been able to devise any form of experiment that will unfailingly demonstrate the effect, because it is impossible altogether to avoid slight waverings of fixation save for very brief periods. I can only assert with a confidence drawn from a considerable experience that though complete fading may occur while both intrinsic and extrinsic eye-muscles are contracted as in convergence with accommodation, yet it occurs far more readily when all the muscles are as far as possible relaxed and at rest.

In the case of after-images the disturbing effects of waverings of fixation are absent, but in all other respects the conditions of the after-sensation are similar to those of the sensation itself (as I have endeavoured to prove[1]), namely a continuous excitation of nerve-endings in the retina by chemical substances. That after-images, besides undergoing changes of brightness and colour, are apt suddenly to disappear and reappear is a familiar fact and the causes of these changes have been discussed by many authors. It has been frequently asserted that movements of the eyeballs tend to cause disappearance of an after-image, and this is certainly true in the case of after-images projected upon surfaces that present any appreciable details of texture. Prof. Exner[2] argues that in such cases the disappearance of the after-image is due to the attention being diverted from it and

[1] MIND, vol. x. [2] *Zeitschrift f. Psychologie*, Bd. i., S. 47.

reflexly or habitually drawn to those features of the visual field that move relatively to the retinæ, because those that are due to objects or stimuli residing wholly within the eye and moving with it, such as *muscæ volitantes* and after-images, have no value as signs of objective existences and are therefore habitually neglected. This view of the matter is borne out by the fact that as one accustoms oneself to pay attention to these appearances they assume a much more stable character. Herr Wirth [1] takes a similar view of the sudden comings and goings of after-images and argues that the chief determining influences are 'Apperceptive Momente'. Prof. Hering [2] too maintains that the disappearance of a projected after-image on movement of the eyes is due to the attention being drawn to new features of the background, and he shows that when an after-image is observed in complete darkness eye-movements do not cause it to disappear, and that the more homogeneous the surface upon which an after-image is projected the less does the after-image tend to disappear on movement of the eyes.

My own observations on the influence of the surface of projection are entirely in agreement with Prof. Hering's, and it is therefore not necessary to describe them here, but in regard to the influence of eye-movements upon after-images I think we may go farther than Hering, and say that, so long as after-images are observed in total darkness, eye-movements not only do not tend to cause them to disappear, but tend rather to maintain them and to restore them to consciousness when they have disappeared. Lateral movements of the eyes in the dark will frequently cause the reappearance of an after-image, but the effect is feeble and inconstant. A movement of convergence with accommodation exerts a much more powerful and unmistakable influence of this sort, and it is possible to restore an after-image several times by making repeated efforts of convergence, the after-image reappearing at each effort and persisting for some few seconds. I find that the form of after-image best suited for this kind of experiment is that last stage of the after-image of a bright light which appears, as noted in a previous paper,[3] as a fuzzy ill-defined grey or dull white, and which, as I there suggested (a suggestion which further experience has confirmed), is due to the apparatus for vision in a dim light (the rod-apparatus or *Dunkel-Aparat* of v. Kries).

[1] *Philosoph. Stud.*, Bd. xvi.
[2] *Von Graefe's Archiven*, Bd. xxxvii., and *Zeitschrift f. Psychologie*, Bd. i.
[3] MIND, vol. x., p. 242.

But the following experiment demonstrates this re-enforcing effect of activity of the eye-muscles more satisfactorily than the observation of a simple after-image, and at the same time it shows that the intrinsic muscles of the eye play the chief part. By two successive applications of $\frac{1}{200}$ grain of atropine sulphate to the left eye I completely paralysed the ciliary muscle and the iris.[1] I then held a slip of white card (about 20 mm. by 50 mm.) in the path

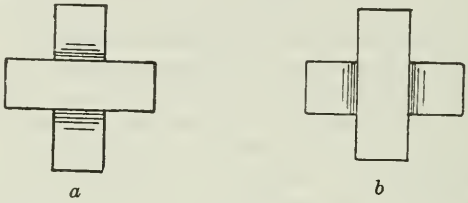


FIG. 4.

of a ray of direct sunlight entering the dark room. I first held it in the vertical position and fixated a point at the middle of the bright surface for 30″ with the left eye alone, and then held it in the horizontal position and fixated the same point for 30″ with the right eye alone. With head covered and eyes closed and in the primary position of rest I then observed the after-images. The two bright positive after-images struggle for predominance just like

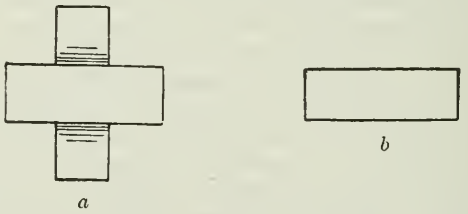


FIG. 5.

vertical and horizontal white strips combined in a stereoscope, appearing alternately like figure 4, *a* and *b*, the vertical strip predominating on the whole because the larger pupil of the left eye has admitted the more light. On then making an effort of accommodation the horizontal after-image always predominates at once, usually to the total exclusion of the vertical after-image of the left eye, and

[1] The atropine paralyses the motor nerve-endings in the muscles, and so prevents impulses passing down the nerves from affecting the muscles.

continues to predominate so long as the accommodation of the right eye is maintained, so that save for momentary appearances of the whole of the vertical image, I see only images of the forms of figure 5, *a* and *b*. I have made many varieties of observations of this kind, using various patterns of bright light (*e.g.*, parallel bars of light forming a square area and presented in different positions successively to the two eyes), and always with similar results.[1]

This observation seems to prove indisputably that contraction of the intrinsic muscles of one eye sends up to the brain, presumably through afferent nerves of the muscles, an influence that directly re-enforces the activity of the cerebro-retinal tract of that eye, while it exerts no such effect upon the corresponding tract of the other eye, or exerts it in a minor degree only.[2]

This re-enforcing effect of the activity of the intrinsic muscles of the eye may be demonstrated unmistakably in the case of direct visual sensations by studying the struggle of two visual fields of different colours. In studying the durations and rate of alternation of the states of consciousness during the struggle of two different visual fields and the changes of mode of apperception of ambiguous figures, it is necessary to make some objective record of the changes at the moment of their occurrence, because the general impression retained by the subject as to the relative frequency and duration of the different states of consciousness is altogether unreliable. So far as I am aware, two observers only have attempted systematically to record such changes, namely Dr. N. Lange[3] in the case of ambiguous figures, and Mr. Breese[4] in the case of the struggle of two different visual fields. Both these observers worked with two contact keys, the subject being instructed to press one key or the other according as

[1] This observation seems to me to afford the most conclusive evidence of the separateness of the visual cortical areas for the two eyes, a fact of great importance for the theory of vision, because as I have pointed out in a previous paper (MIND, vol. x., p. 222) it seems to present an insuperable difficulty to the theory of "Gegenfarben".

[2] In the recently published *Monograph Supplement* (vol. iv.) of the *Psychological Review*, Mr. E. B. Holt describes experiments which seem to show that, during voluntary movements of the eyes, visual sensations are interrupted or inhibited for a brief moment. I find in my notebook the following note: "It is noteworthy that in all cases the re-enforcing effect of activity of the eye-muscles does not seem to manifest itself until an appreciable period after the beginning of the effort". There is therefore nothing contradictory in my observations to those of Mr. Holt.

[3] *Phil. Stud.*, Bd. iv.

[4] *Psycholog. Review, Monograph Supplement*, No. 11, 1899.

one or other of two states of consciousness predominates. Now, I find that, in the case of myself and of several other subjects, the periods of complete predominance of one or other form do not make up the whole period of observation, but that between these periods there come others, in the case of two differently coloured fields, periods during which the two colours appear fused or mixed as irregular patches, and in the case of ambiguous figures, such as those of figure 6, periods during which the figure does not assume either of the dominant forms, but appears as a number of lines in one plane of which some may or may not group themselves in consciousness apart from the rest. It seems necessary therefore to use a form of apparatus that will enable the subject to register the duration of these intervening periods as well as of the periods of distinct dominance, and I have devised for this purpose the apparatus described in the note below.[1]

[1] A brass cylinder 590 mm. in circumference is made to rotate on a horizontal axis by clockwork driven by a heavy weight. The motion is kept regular by a delicate pair of wind-sails and can be set to any required speed of a considerable range by adjusting the driving weight and the size of the wind-sails. For these experiments the speed was adjusted to give one complete rotation in 118 seconds, which means a translation of any point on the surface of the drum at the rate of 5 mm. per sec. The drum is sheathed in a sheet of smooth white paper of such a length that its two ends united by gummed slips do not quite meet, but leave exposed a slip of the brass cylinder about 4 mm. in breadth. The writing apparatus consists of a tubular glass pen or ink-holder drawn to a point capped with brass. This is clamped in a pen-holder which forms one arm of a two-armed lever, the other arm carrying an adjustable counterweight. The fulcrum of this lever consists of a piece of small brass tube about 20 mm. in length which slides smoothly upon a steel rod held by adjustable clamps in the horizontal position between two metal upright supports which are carried by a strong iron base-plate. This is placed so that the horizontal steel rod lies parallel to the surface of the drum and at such a distance that the point of the pen lies lightly upon the paper. As the drum rotates the pen then traces a continuous line and after each complete rotation it slips off the edge of the paper on to the narrow strip of exposed metal surface, and in so doing causes the drum to give out a bell-like note which signals to the operator the completion of the rotation. A second pair of uprights fixed in a separate base-plate carries a second horizontal steel rod on which also slides a short piece of brass tubing encased in india-rubber; this is the finger-piece. This second rod carrying the sliding finger-piece is placed parallel to the first and at any distance from it that is most convenient. Attached to one of the supports of the rod carrying the penholder is a small brass pulley, and a silk thread attached to the finger-piece is carried from it round this pulley and tied to the axis of the penholder. This sliding axis is also attached to the support of the other end of the rod on which it slides by a light india-rubber band. The range of movement of the finger-piece is limited to about 25 mm. by a pair of stops on the steel rod, and the length of the silk thread joining

In studying the struggle of two differently coloured visual fields with the aid of the apparatus described in the note I sit before a prism-stereoscope of the ordinary form, fixed in a horizontal position over an aperture in the window-shutter of the dark-room, the two fields being patches of light transmitted through coloured paper or gelatine, and I hold between the finger and thumb of the left hand the finger-piece of the apparatus described in the note. During complete predominance of one coloured field I hold the finger-piece against one stop and on predominance of the other I slide it over and hold it against the other stop and when the two colour-fields appear fused or mixed in patches I hold it in a position midway between the stops. In this way a line of the form of figure 6 is traced on the paper and it constitutes a record of the number of changes of colour and of the duration of each phase of the struggle during the 118 secs. of rotation of the drum.

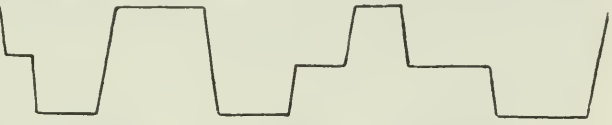


Fig. 6.

In this way I have made a considerable number of series of observations, but since I do not think that the average of the results of a large number of such series will give a truer picture than the records of a single one of the most satisfactory and representative series, I will present the record of one such series, merely stating that it is in harmony in all important points with the other records obtained in similar experiments. In this series the competing fields were two small squares (2 mm. wide but slightly magnified by the stereoscope), either one occupying the centre of a white square of about equal brightness and 10 mm. in width. These two fields were mounted on separate black cards, the light of the two square fields being transmitted through holes in the cards, and the rest of the aperture in the shutter

the two sliders is so adjusted that the finger-piece is held against the one stop by the tension of the rubber band. The pen-holder then accurately reproduces every sliding movement of the finger-piece between its two stops, and the pen records these movements upon the moving paper. This apparatus is very simple and constant in the working, it involves neither electrical connexions nor smoked surfaces, both of which are apt to prove unmitigated nuisances, and it can easily be worked by the subject without the aid of an assistant.

being filled by the opaque cards; the two cards overlapped and the distance between the two coloured fields could be adjusted by sliding the one card behind the other. The white borders aid in maintaining perfect coincidence of the two coloured fields. The one square was orange, the other blue. Each observation lasted during one complete rotation of the drum, *i.e.*, 118 seconds, and each was repeated with the cards transposed, so that in the one observation orange was presented to the left eye and blue to the right eye, and then in a second observation, under otherwise similar conditions, blue was presented to the left eye and orange to the right eye. The results of these parallel observations are presented side by side in the following table. The muscles for accommodation of lens and pupil of the left eye were completely paralysed through previous application of atropine, the right eye was normal.

In the pairs of observations I., II. and III. the two fields were at such a distance apart that they appeared combined when the visual axes were approximately parallel.

I. *Passive.*

	a.	*b.*
Left eye .	14 O = 36″	17 B = 20″
Right eye.	16 B = 37″	29 O = 45″
	N = 45″	N = 53″

II. *Holding B.*

	a.	*b.*
Left eye .	26 O = 17″	17 B = 31″
Right eye.	27 B = 52″	29 O = 29″
	N = 49″	N = 58″

III. *Holding O.*

	a.	*b.*
Left eye .	22 O = 45″	14 B = 11″
Right eye.	20 B = 16″	29 O = 59″
	N = 57″	N = 48″

In the case of the following pair of observations the two fields were 20 mm. nearer together than in preceding cases, so that their binocular combination involved a moderate degree of convergence of the two eyes.

IV. *Passive.*

	a.	*b.*
Left eye .	12 O = 8″	9 B = 9″
Right eye.	19 B = 32″	24 O = 26″
	N = 78″	N = 83″

In this table 'Passive' means that throughout the observation my attitude was as far as possible that of a passive

spectator of the series of changes; 'Holding B' means that I attempted to favour the predominance of the blue square by a voluntary effort, that is when the blue predominated I concentrated my attention upon it and when orange predominated, or the two were fused to a neutral tone, I made efforts to recall the blue square. N in the table stands for the periods of neutral or mixed colour, and the figure standing after N is the sum of these periods expressed in seconds during one rotation of the drum. The figure standing before O or B is the number of appearances of this colour during the rotation, and the figure standing after O or B is the sum of the periods of those appearances expressed in seconds. The latter are the significant figures, the number of appearances being of little importance. These figures appear at first sight somewhat chaotic but on consideration of them the following points appear very distinctly under equally favourable conditions. O tends to predominate over B, and this tendency is obscured in I. *a* and exaggerated in I. *b*, because the field of the normal right eye is favoured, as against the field of the atropinised left eye, presumably through a slight activity of the intrinsic muscles of the normal eye. II. *a* and III. *b* show that a voluntary effort to favour the predominance of one colour-field is very successful when that colour is presented to the normal eye, the gain being 15″ in the case of B and 14″ in the case of O. II. *b* and III. *a* show that the sensation excited in the retino-cerebral tract of the atropinised eye can also be favoured by voluntary effort but to a less degree than that excited in the normal eye, the gain being 11″ and 9″ for B and O respectively. IV. *a* and *b* show that the effect of convergence is twofold; firstly the neutral periods are much prolonged at the expense of the periods of predominance of the pure colours; this effect must be ascribed to the activity of the extrinsic muscles of both eyes which, maintaining the convergence of both eyes, re-enforces or supports the excitement of both cerebro-retinal tracts. Secondly, the field of the normal eye is favoured relatively to that of the atropinised eye and to a greater extent than when the visual axes are parallel; this must be due to the increased activity of the intrinsic muscles of the normal eye that accompanies convergence.

I will quote briefly the similar results of one other series of observations made by a different method. This series too was one of several made by the same method and giving similar results.

A plate of milk-glass, 3 cm. square, let into window-shutter

of the dark room, was lit by an evenly grey sky. The centre of this bright square was fixated by both eyes at a distance of 50 cm. The left eye was completely atropinised, the right eye was normal, and an artificial pupil of 2 mm. diameter was worn before either eye. Then with a blue glass before the left eye and a red glass before the right eye a record of the struggle of the blue and red fields was made with the help of the apparatus described above. The resulting figures were :—

Sum of B periods = 21″ (left eye)
„ R „ = 33″ (right eye)

and on repeating—

Sum of B periods = 19″ (left eye)
„ R „ = 26″ (right eye).

Then with the glasses transposed, *i.e.* with red glass before

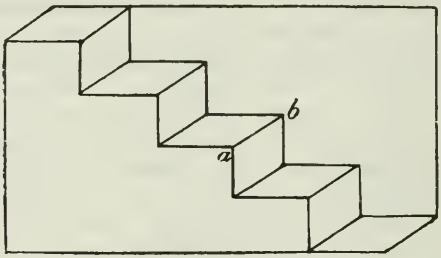


Fig. 7.

the left eye and blue glass before the right eye, the figures were :—

Sum of R periods = 8″ (left eye)
„ B „ = 37″ (right eye)

and on repeating—

Sum of R periods = 7″ (left eye)
„ B „ = 41″ (right eye).

The asymetrical character of the figures is due to the tendency of the blue field to predominate under equally favourable conditions, but in spite of this the re-enforcement by activity of the intrinsic muscles of the normal eye is very clearly marked.

These observations seem to prove in a more direct and conclusive manner than any others with which I am acquainted two important points, (1) that the whole cerebro-retinal tract in which colour-sensations are excited is double, *i.e.*, that the tract of either eye is separate and distinct from

that of the other eye; (2) that the excitement of the tract of either eye is directly and powerfully re-enforced during activity of the intrinsic muscles of the eye through impulses carried up to the brain by afferent nerves from those muscles.

The effects of contractions of the eye-muscles in determining the modes of ambiguous figures are well known. Prof. Titchener points out[1] that in the case of the staircase-figure reproduced in figure 7, a movement of the point of fixation of the eyes from *b* to *a* favours predominance of the step-mode, while movement from *a* to *b* favours the broken-wall mode of perception. I find that it is possible after a little practice to associate the reverse change with either of these movements, nevertheless it remains true that the

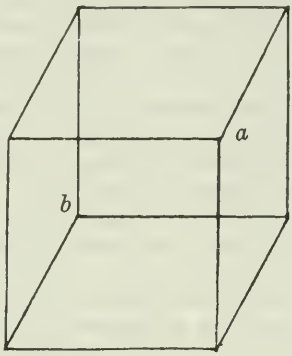


Fig. 8.

changes occur most readily in association with movements of the directions pointed out by Titchener.

Prof. Leob[2] has pointed out the influence of movements of accommodation in determining the mode of perception of such figures as Necker's cube (fig. 8). If one of the central angles, *a* or *b*, is fixated with one eye only, and then accommodation be slightly increased, that angle tends to appear convex and as the nearest point of the obliquely lying cube; and if then accommodation be a little relaxed, the angle fixated suddenly recedes and appears as a concave solid angle and the farthest point of the cube. These movements of accommodation render these changes of the mode of perception easy and are, as it were, natural to them, but I shall have occasion in a later section to point out that they are by

[1] *Experimental Psychology*, vol. i., pt. ii., p. 312.
[2] *Pflüger's Arch.*, Bd. xl.

no means indissolubly associated with, or necessary to, the voluntary determination of the changes.

The influence of eye-movements on the mode of perception of such objects as figure 2 is very marked. It may be studied most conveniently and in its purest form in the after-images of such figures. When a clear after-image of figure 2 is obtained (in positive and negative after-images the effects are alike) movements of the eyes along the direction of any one of the three possible linear groupings greatly facilitate the appearance of that grouping, and by such movements the three linear groupings or any two of them may be made to alternate with one another regularly, or one grouping may be made to persist to the exclusion of all others for several seconds.

We may note lastly in this connexion that activity of the eye-muscles favours the return to consciousness of the primary memory-image; as Prof. Ward[1] writes, after a momentary glance at an object, "the object is imaged for a moment very vividly and distinctly, and can be so recovered several times in succession by an effort of attention. Such reinstatement is materially helped by rapidly opening and closing the eyes, or by suddenly moving them in any way." And he adds, "In this respect a primary memory-image resembles an after-sensation, which can be repeatedly revived in this manner when it would otherwise have disappeared".

My own experience bears out this statement entirely, and I would only add that the movement that has the most marked effect of this kind is a movement of convergence with accommodation.

I turn now to the consideration of the physiological adjustments in virtue of which the muscular activities are able to produce these effects. In this connexion I have no novel suggestion to make. I would merely attempt to render a little more definite and concrete the view of the process adopted by Dr. Maudsley, by Profs. Wundt, Ribot, James and others. This view may be stated shortly in Ribot's words: "As a motor organ the brain plays a complex *rôle*. In the first place, it inaugurates the movements that accompany perceptions, images or ideas; afterwards, these movements, which frequently are intense, return to the brain by way of the muscular sense as sensations of movement; the latter increase the quantity of available energy,[2] which on

[1] Art. "Psychology," *Encyclop. Brit.*, p. 59.

[2] We see here that Ribot uses the conception of a common store of free energy in the afferent side of the nervous system, in much the same way as I have used it above.

the one hand serves to maintain or to reinforce consciousness, and, on the other, returns to its original starting-point in the form of a fresh movement." [1] Allowing for a certain looseness of the phrasing, this sentence seems to me to represent the process correctly. Ribot distinguishes two parts of the effect produced by the inflow of neurin by the nerves of the muscular sense, (1) part of it at once re-enters the motor tract to maintain the contraction; (2) part serves to re-enforce consciousness. The former process, the return of the excitement to the motor tract, implies the existence of the 'motor circle' as it has been called by James. The principle of the motor circle is now pretty well established as obtaining very generally, if not universally, throughout the cord and subcortical levels. It may be schematically represented as follows (fig. 9): A stimulus at S excites the sensory neurone *a*, which discharges through a central neurone *b* into motor neurone *c*, thus bringing about a reflex contraction of some muscle *m*; the contraction of the muscle stimulates its afferent neurone *d*, and this then discharges into the central neurone *b*, and so re-enforces the excitement of this reflex path and maintains the contraction.[2] And this arrangement seems to be repeated in the second or sensory-reflex level, for, as Ebbinghaus puts it,[3] "Those parts of the cerebral cortex, which centrifugally are connected with the cells of origin of a particular movement-complex in the subcortical centres, contain also the end-station for the kinæsthetic excitations arising from the execution of just this movement and passing centripetally to the cortex". So that this path (k in fig. 9) in the Rolandic cortex, whose activity determines the sensation of movement, constitutes a loop upon the motor-circle, leading off from the afferent neurone *d*, and returning to the motor neurone *c* of that circle.

The motor effects of a sensory, say a visual, stimulus thus tend to maintain themselves and the corresponding kinæsthetic sensation by a circular activity, and they also support and maintain sensation in general by contributing to the influx of neurin to the afferent side of the nervous system. They do not however re-enforce in this way all sensations equally,

[1] *Psychology of Attention*, p. 20.

[2] For the evidence of the prevalence of this arrangement see Chaveau, "On the Sensorimotor Nerve-circuit of Muscles," *Brain*, vol. xiv.; Sherrington, Marshall Hall Address, 1899, 'The Spinal Animal,' *Medico-Chirurgical Trans.*, vol. lxxxii.; James, *Princ. of Psychology*, vol. ii., p. 583.

[3] *Grundzüge d. Psychologie*, Bd. i., S. 692.

but chiefly those of the sense organ whose excitement has initiated these motor effects, for, as we have seen above in the case of the two eyes, the afferent influx from the intrinsic muscles of one eye re-enforces the sensations of that eye much more strongly than those of the other eye. We must assume then that the afferent tract from the intrinsic muscles of

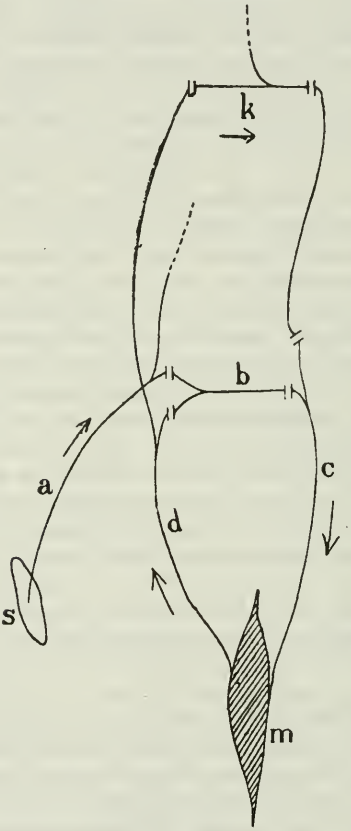


FIG. 9.

either eye is specially connected with the tract leading from the retina of that eye, so that the excitation process initiated in it by contraction of the muscles discharges not only through the motor-circle but in part through the retino-cerebral tract, augmenting in the latter the excitement which is directly due to the visual stimulus. How exactly the two

tracts are connected, whether on the afferent side, as seems probable, or only on the motor side, we cannot yet say.

But the contractions of the muscles of one eye, not only re-enforce the visual sensations of that eye and in so doing tend to make those sensations the objects of Attention, they exert a still more complex effect, for, as we have seen in studying figure 2 and the other ambiguous figures, the contractions tend to determine one or other mode of Attention to the sensations according to the character of the contractions and the kinæsthetic impressions initiated by them. And the relation is a reciprocal one, each mode of Attention to figure 2 tends to determine a certain mode of activity of the eye-muscles and this mode of activity of the eye-muscles, when otherwise determined (accidentally or voluntarily), tends to bring about that particular mode of Attention. Here the central connexions between the kinæsthetic and the visual tracts are still more intricate and complex than in the case of simple re-enforcement of sensation, and it would be premature to attempt to define them otherwise than very roughly and in general terms. Let us take the case of the perception of figure 2 as horizontal rows of discs. The upper-level path, whose excitement converts the undiscriminated sensation of patches of light into the perception of patches regularly grouped in horizontal rows, is a path leading from the visual cortex to the Rolandic or kinæsthetic cortex and there making connexion with a group of neurones whose excitement determines a to and fro movement of the eyes in the horizontal direction. If, on glancing at figure 2, I see it at once as horizontal rows of discs, it is because the sensory excitation discharges in part at once through this upper-level path. If, on the other hand, I voluntarily move my eyes to and fro horizontally and so determine the onset of this mode of Attention the order of events is as follows,—I call up the kinæsthetic idea of lateral movements, which, physiologically expressed, is to excite the group of neurones of the kinæsthetic cortex which lead to the subcortical centres for lateral movements; and these neurones are the paths of efferent discharge of that upper-level path which comes from the visual cortex; their excitement therefore throws open this path by lowering the resistance of its efferent outlet, and the excitation-process of the visual cortex then discharges in part through it to the kinæsthetic neurones. For each mode of perception of figure 2 we must assume an upper-level path of this kind, a path leading from the visual cortex to a group of kinæsthetic neurones whose excitement issues through the motor neu-

rones that bring about the corresponding eye-movement and which are in turn excited by such eye-movements.

In some such way as this we must seek to explain the effects of motor-activities in determining the mode of attention. In the following section I propose to bring forward experimental evidence that the motor-effects or accompaniments of sensory perception have not that predominant or exclusive importance with which they have been credited by several authors.

IV.—THE DISJUNCTIVE JUDGMENT.

By G. R. T. Ross.

The main object of this paper is to try to determine the import of the disjunctive judgment and to find out the exact place which it occupies in the connected whole of logical thought.

The point which I wish to raise first is as to the question of the exclusiveness of the judgment. I wish to bring up certain arguments to combat the theory held by Mr. Bradley and Mr. Bosanquet when they declare that in the disjunctive judgment (A is either B or C), properly interpreted, the alternatives B and C are exclusive of each other. It is my intention rather to uphold the view of Mr. Keynes, who is quite as sure that the common proposition with 'either' is merely an alternative judgment and that B and C do not, according to the mere form of the thought, necessarily exclude each other. It seems to me that there are several considerations based on common logical usages which go to show that Mr. Keynes is right.

Mr. Bradley (*Principles of Logic*, p. 124) allows that the form of words "A is either B or C" may sometimes be used when we do not wish to deny that A may be both B and C, but he declares that, when using this expression, we leave out of sight the contingency that A may be both B and C, and finally asserts that, in such cases, our language is slovenly, implying that if we wished to be accurate we should say "A is either B or C or both B and C"—all the alternatives being exclusive. We might criticise this conclusion and ask how it is that B C can be exclusive of B and C when as a matter of fact it includes them.

If alternatives are necessarily exclusive of each other we shall have to make our judgment still more pedantic and say "A is either B alone or C alone or both B and C"—"He is either merely a fool or merely a rogue or both a fool and a rogue". The mere fact that in order to make our disjunction

exclusive we have to prefix "merely" to the terms, should indicate that naturally it is not exclusive.

It is, of course, matter of fact that, when we use the judgment symbolised by "A is either B or C," very frequently B and C are exclusive, but what I wish to maintain is that this is owing to the nature of those terms, and is not to be inferred from the form of the judgment. When we make a disjunction, we, more often than not, divide a genus into its species, and of course co-ordinate species are mutually exclusive; they would not be species unless they were exclusive, but frequently the predicate concepts are not of species but of attributes not known to be specific, and then we cannot say that they are exclusive of each other.

No doubt one of the aims of science is to divide genera into mutually exclusive species, just as it is to find a relation between subject and predicate in virtue of which we can say not only "All S is P" but "All P is S," *i.e.* to attain to the predication of property. Now, though in many cases when we assert that "All S is P" we know that "All P is S," no one maintains that we can infer from the form of the judgment that this is so. But, if logicians like Mr. Bradley consistently applied the principle they adopt in interpreting the disjunctive judgment, they would have to assert that the universal affirmative, properly employed, is simply convertible.

So much for the argument from consistency, but there are other considerations which go to show how inexpedient it is to treat the disjunctive judgment as necessarily exclusive.

It is generally admitted that the force of a disjunction can be partially rendered by hypotheticals. The hypotheticals do not exhaust its content, for disjunctive judgment is the union of hypotheticals upon a categoric basis. "A is either B or C" means that A is positively related to X the underlying identity of both B and C. Though our alternatives be B and not-B, the mere *nomen indefinitum* (in which case the disjunction is *a priori*, merely a particular instance of the law of excluded middle, and can be made, whatever the concept symbolised by B), there is still, I suppose, the underlying identity of Being, the X which pervades both B and not-B.

But commonly B and not-B are merely contradictories within a genus or limited "Universe of Discourse". In such a case the alternatives are more properly symbolised by $b\ x$ and $b'\ x$ as, for example, in this instance "triangles are either right-angled or not right-angled". The categorical assumption at the basis of this disjunction is that the triangle has

angles. But in this and all similar examples the disjunction proper, the relation asserted between the two predicate terms, is derived *a priori*, that is to say, it is deduced not from some principle peculiar to the science with which we are dealing, but from one of the κοινὰ ἀξιώματα common to all thought, in fact, in this case—disjunction—the law of excluded middle. When we say that triangles are either right-angled or not we are simply giving an instance of the *principium exclusi tertii*, which could be equally well illustrated by the predication of any other attribute appropriate to the science in question and its contradictory.

Now the hypotheticals into which it is claimed by the exclusivist theory that a disjunction can be analysed are "If A (which is assumed to be X) is not *b* it is *c*" (categorically, "All not-*b*[1] is $c = b'\ ac$") together with its equivalent, "If A is not *c* it is *b*," together with the other geometrically converse non-inferable hypothetical, "If A is *b* it is not *c*" (categorically "No *b* is $c = b\ e\ c$"). The first hypothetical shows that the disjunction is exhaustive, the second that it is exclusive.

But in the case we were discussing, that of *a priori* disjunction, the alternatives are given as *b* and *b'*. So that our statement is analysable into the two jejune truths "All not-*b* is $b' = b'\ a\ b'$" and "No *b* is $b' =$ No *b* is not-*b*". Obviously if the terms of our disjunction are given as *b* and *b'*, *i.e.*, a positive concept and its corresponding *nomen indefinitum* (which, though it be restricted in range, is still indefinite as containing a possible endless internal plurality), then our judgment is both exhaustive and exclusive. But such a judgment is of no importance in itself and finds no place in the science within which the subject of predication lies. It is an empty truth and we do not get real disjunction

[1] I hope my symbols may not be misunderstood. Strictly the categorical judgments which should represent "A is either *b* or *c*" are "All A which is not *b* is *c*" and (on the exclusivist theory) "No A which is *b* is *c*," or perhaps "All A (agreed to be X) which is not *b* is *c*" and the corresponding negative. But for brevity the reference to the ὑποκείμενον A or AX may be left out, as it is, so to speak, a common factor in all the judgments and does not enter specially into our further reasoning. That part of the content of thought through synthesis with which fresh determinations are added to the subject is represented by the concepts *b* and *c*.

N.B. The symbols *a* and *e* refer nowhere to terms, but indicate the quantity and quality of the judgment as in Mr. Keynes's scheme. The symbols S and P which in his scheme represent the terms are inadmissible here, as the alternatives *b* and *c* are generally viewed equally as subjects (S) when viewed as subjects, and equally as attributes (P) when viewed as attributes.

until the alternative terms both stand for positive concepts, until we know what we mean by *b′* (in our illustration acute and obtuse angled), in which case our judgment is better symbolised by "A is either B or C" than by "A is either B or B′".

We have then to interpret what we mean by a real disjunction, one in which C is not by definition not-B. It is still apparent in those disjunctions that a categorical basis is assumed. When we say such and such a kind of flower blooms either in spring or in autumn, "blooms" is the predicate categorically asserted, and when we declare that some one is either a fool or a rogue, objectionable person is probably the basal quality common to both.

Now there are three possible suppositions as to the relation between *b* and *a* in real disjunctions.

(1) That both propositions hold, both "If A is not *b* it is *c*" and "If A is *b* it is not *c*" (*b′ac* + *bec*). This is the exclusivist theory and its supporters point to such judgments as "lines are either straight or curved," "organ pipes are either closed or open" in seeking evidences for their plea. The special type of such judgments as those last quoted, where it is apparent that both the independent assertions S′*a*P and S*e*P are true, will be investigated later on.

(2) Then there is the possibility that *b* and *c* may be exclusive but need not between them exhaust the whole of the proximate genus, *e.g.*, dog and wolf do not exhaust the Canidæ. Such a statement, however, is not a disjunction. Logicians are quite clear that the disjunctive judgment is at least exhaustive, that all not-*b* is *c*. If I say—"this species of fish is found either in lakes or rivers," when I know that it is found also in the ocean, I make a misleading statement.

(3) There is lastly the possibility that *b* and *c* may be merely alternatives not mutually exclusive, as, *e.g.*, fool and rogue. Now if the first possibility is true and both the hypotheticals "If A is not *b* it is *c*" and "If A is *b* it is not *c*" are to be found in the disjunction, it will follow that "A is either B or C" and "A is either not B or not C" mean exactly the same thing; for the former is equivalent to—"If A is not *b* it is *c*" and "If A is *b* it is not *c*" (all not *b* is *c* + no *b* is *c*) and the second becomes "If A is not not-*b* it is not *c*" and "If A is not-*b* it is not not-*c*"; these simplified come to—"If A is *b* it is not C" and "If A is not *b* it is *c*"—exactly the same pair of propositions as the other disjunction yielded.

This result can be shown in another way. According to the theory of complete exclusion both the *modus tollendo*

ponens and the *modus ponendo tollens* in the disjunctive syllogism are valid. But whether the major premiss be "A is either B or C" or "A is either not B or not C," we can by applying the same minor premisses get the same conclusion.

(1) A is either B or C
A is not B
$\therefore$ A is C

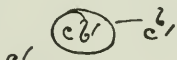
(2) A is either B or C
A is B
$\therefore$ A is not C

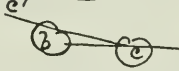
(1) A is either not B or not C
A is not B
$\therefore$ A is C

(2) A is either not B or not C
A is B
$\therefore$ A is not C

But surely it is clear that when we say "A is either B or C" we do not mean the same thing as "A is either not B or not C" and *vice versa*. If some one tells us he has seen a ghost, we may declare that he is either not sane or not telling what he believes to be the truth. But it would be rather perplexing for the person who uttered this to be assured that from his assertion could be inferred the other—that the ghost-seer was either sane or truthful. While admitting that sanity and truthfulness in a ghost-seer are exclusive of each other he would not desire to make any disjunction between these qualities. He means that no person who asserts that he has seen and talked with a ghost and is sane, is truthful, but not that all such who are insane are truthful. Many people may be neither sane nor truthful.

(*Note.*—Diagrams to represent the three possible cases of relation of *b* and *c*.

(1)  *b'ac* + *bec* both true.

(2)  *bec* alone true.

(3) *b'ac* alone true.

The above example is illustrated by (2) if *b* and *c* are taken to represent 'truthful' and 'sane' respectively. The disjunction is exhaustive between *b'* and *c'*, for all not *b'* is *c'* = all *b* is *c'* = no *b* is *c*.)

Again, since on the exclusive interpretation of disjunction "A is either B or C" and "A is either not B or not C" are equivalent expressions, it will be impossible to commit the fallacy of denial of the antecedent or affirmation of the consequent in dilemma.

The formula for a simple dilemma is:—

	If A is B it is D
and	if A is C it is D
But	A is either B or C
∴	A is D

But as alternatives are exclusive, A is either not B or not C will be eqivalent to A is either B or C.

If we take as an example of a minor premiss in a dilemma the statement which we find in Jevons (*Elementary Lessons*, p. 168) as conclusion of a destructive dilemma, that a person who speaks irreverently of Scripture is either not wise or not good and add as a major that we should cherish the company of one who is either wise or good, then on the theory of the equivalence of positive and negative disjunctions we should have to conclude that we should cherish the company of one who speaks irreverently of Scripture!

To avoid this result, those who hold to the position that a disjunctive judgment should express complete exclusion would have to maintain that the above negative disjunctions are carelessly worded; but, as has been pointed out before, no amendment would be satisfactory that stopped short of the very far-fetched formula: 'He is either merely not wise or merely not good or neither wise nor good'.

But it is quite unnecessary to adopt a form of words so remote from ordinary expression, for it can be shown that the disjunction serves all logical purposes (except indeed the establishment of a conclusion by the disputed *modus ponendo tollens* which will be discussed later on) if we interpret it as merely exhaustive without necessarily being exclusive, *i.e.*, 'If A is not *b* it is *c*' is the only hypothetical necessarily implied in disjunction.

The minor premiss of a dilemma is always a disjunction, but this disjunction enters the argument only so far as it is exhaustive; furthermore, however we interpret the minor premiss, whether as exhaustive only or both exclusive and exhaustive, the conclusion of the argument, when disjunctive, is proved only in so far as it is exhaustive, never as exclusive.

Since hypothetical and disjunctive reasoning is true only in so far as it obeys the canons which were formulated first of all for the categorical syllogism, and since reasoning is perhaps clearest when reduced to that type, I propose to prove my last assertions by an analysis of a dilemma which reduces it to its categorical elements.

The simplest and normal type of complex constructive dilemma is:—

If A is B it is D = all *b* is *d* = *bad*
If A is C it is F = all *c* is *f* = *caf*
A is either B or C = if A is not *b* it is C = *b'ac* (+ if A is *b* it is not *c* = *bec*)

∴ A is either D or F = if A is not *d* it is *f* = *d'af*

It will be shown that from the given premisses the conclusion cannot be made to yield if A is *d* it is not *f* = *def*. From the various premisses shown above we have to elicit a conclusion showing a relation between *d* and *f*. Take the minor *b'ac;* this gives by immediate inference *c'ab*, which combined with the first limb of the major, *bad*, gives as conclusion *c'ad:*

$$\begin{array}{r} bad \\ b'ac = c'ab \\ \hline c'ad \end{array}$$

Similarly *b'ac* and *caf* give *b'af*. Again *c'ad* = *d'ac* + *caf* give *d'af*, *i.e.*, all not *d* is *f* = if A is not *d* it is *f;* which is the same as 'A is either D or F,' interpreted only exhaustively.

And it can be easily seen that, however we interpret the minor, it is impossible to reach the conclusion *def* = no *d* is *f;* for *bec* with *bad* will yield no universal conclusion, nor will it do any better when taken along with *caf*. Hence, as there is no other available premiss, there is no way of reaching the conclusion *def*, which we should have to do if 'A is either D or F' were exclusive.

A man at the top of a burning house may reason thus, 'If I jump from the window I shall break my leg and if I do not I shall be burned to death'. Between jumping and not jumping there is no middle course. These two alternatives exclude one another and exhaust all the possibilities (it is a case of *a priori* disjunction), but though the minor premiss is, in this case, both exhaustive and exclusive, the conclusion cannot be held to be so. It is—"I must either get my leg broken or be burned to death". But this can only be held to mean—"If I do not face the certainty of getting my leg broken I shall be burned to death"—and its equivalent—"If I escape death by burning it will be only at the cost of a broken leg". But the unfortunate man cannot be sure that the accident to his limb will procure him safety from burning (he might be scorched fatally even though he took the leap); nor can he promise himself that he will not break his leg before the flames consume him. It is obvious then that

the disjunctive judgment as used in dilemma is exhaustive only and not exclusive.

Now it is in this form of argument, I submit, that disjunction is most commonly employed. No doubt the dilemma is very frequently dialectical (in the Aristotelian sense) for the reason that an exhaustive minor premiss of the type All not-*b* is *c* is hard to substantiate even when *b* and not-*b* fall within a limited genus *x* and are not logical contradictories which between them exhaust all reality like S and not-S. "All non-parallel straight lines meet" is an example of a proposition of the kind which is immediate and does not require proof. (It may be called axiomatic but yet it is not *a priori* in the sense of being drawn from a principle superior to the science of Geometry itself; it is a peculiar immediate principle of that science.)

But it is very difficult to *deduce* a judgment of this kind. Generally speaking it is impossible to be sure that we have exhaustively divided a genus unless the *fundamentum divisionis* itself contain distinctions which can be exhaustively enumerated, *e.g.*, we can divide hawks into long- and short-winged, or organ pipes into closed and open, when those two distinctions, while contradictory to each other, are both positive and exhaust the possibilities as to the relation between the end of the pipe and the outside air.

Again, when the minor premiss of a dilemma is exhaustive either immediately or as a result of proof, then in those circumstances it is common for one or other of the limbs of the major premiss to be false or at least not to be a necessary truth.

For example our man in the burning house says that if he does not jump he is sure to perish by burning, but this being a predication concerning a finite individual is contingent; it can only be a statement of probability.

Though the dilemma is thus chiefly employed in 'dialectic' and many logicians almost omit to mention it on this account, still it is one of the chief arguments in which the disjunctive judgment is employed.

Apart from this, the proper place of disjunction in science is in division, which is not proof, but practically a special μέθοδος by itself. Any attempt to discover the properties of an object by διαίρεσις involves a begging of the question at each step in the division.

For example, if one begins by dividing all reality by dichotomy and at length arrives at a genus A opposed to not-A which again falls into divisions B and C, then if we independently know that the object of which we are treating

is not B we can say it is C, but only if we have already subsumed this particular thing under A; the proof must always rest on this assumption. This is one way of stating the objections to the value of the disjunctive syllogism. Mr. Bosanquet has indeed gone so far as to assert that the disjunctive syllogism is no inference, but that the whole of the inference is contained in the major premiss—the disjunctive judgment which is itself an inference. This is surely misleading, and I shall try to show that the disjunctive syllogism has a certain limited value in science but that the value of the inference lies wholly in the *modus tollendo ponens*.

The judgment which we are here considering may be, for want of a better name, styled the *divisive* disjunction. In matters of empirical knowledge it is, as Sigwart (*Logic*, i., p. 230, Eng. Trans.) points out, preceded by the divisive judgment—'Some A is B and some A is C'. Both predicates are considered as actual or realisable.

It is what Mr. Keynes (*Formal Logic*, p. 232, third edition) refuses to regard as a true alternative, but merely an "alternative synthesis of terms". Mr. Bosanquet however (*Logic*, i., p. 345) thinks it to be the "true or ideal disjunction"; it is a "generic judgment whose content is developed or interrelated by the aid of hypotheticals".

It is, of course, different from the 'disjunction of ignorance'. We may have judgment of both types about the same subject. Thus we may say 'The triangle is either equilateral, isosceles or scalene'—a true divisive disjunction —and again, 'the triangle is either an arbitrary fiction of the imagination or an objective determination of reality'. In divisive disjunctions the subject is used distributively or as a system of interrelated parts or functions; in disjunctions of ignorance, on the other hand, the subject is viewed non-distributively, *i.e.*, as an individual in the strict sense. If 'the signal light is either red or green' is not a disjunction of ignorance, it must be a predication about the functions of the signal light and tell us that sometimes it shines green and at other times red.

Now Mr. Bosanquet's objection to the disjunctive syllogism is that the minor premiss adds no content to the disjunctive major. But is this so? Surely we can specify in the minor under what conditions the signal shows either red or green. We may say "With the lever in the cabin so, the signal cannot be green, hence it is red".

Or again, if our subject be a genus 'A,' we may say, 'All A is either B or C,' but in the minor we are not limited to this 'A' as a subject; surely we may specify our subject

and say species *a* is not B and hence it is C. The assumption came in, as we saw, in ranking species *a* under A; the διαίρεσις is presupposed, but apart from this there is genuine inference. What we have done is to limit our discussion to the genus or universe of discourse marked by A, but within this there is a genuine synthesis of content, *a* with *c*, and it is a mediated synthesis; hence it is, so far, a genuine inference.

The divisive disjunction is used chiefly perhaps in classification. Now classification depends upon the mutual exclusiveness of species, and the distinction of species in a genus depends, I shall try to show, on certain indemonstrable negations. If our disjunction is used in classification then the *modus ponendo tollens* is valid (though *a priori* and producing no conclusion in itself valuable), but a divisive judgment need not be one of classification, and hence may not permit of the employment of the *modus ponendo tollens*. I shall give an example of this latter class and try to show how such a judgment passes into a classificatory disjunction.

We may say that such and such a kind of fish is found either in streams or in fresh water lakes. This is more than the conjunctive proposition that the kind of fish in question is found both in streams and in lakes, for we have denied that it is found elsewhere (*e.g.*, the ocean) than in the two places mentioned. But our assertion does not deny that the very same kind of fish is found in both. In this case we may very well understand the reverse, nor does our statement imply that the same individual may not live now in a lake at another time in a stream.

Now, we may find that those individuals found in the streams have peculiarities distinct from the characteristics of the denizens of lakes. We may find that living in the different localities may accompany or may indeed have helped to produce differences of behaviour and structure in each case, and hence we may be able to divide our genus into two species or at least varieties of fish, according to the amount of difference between the two classes. The moment that we understand that the attributes river- and lake-inhabiting mark two different classes, then to the exhaustive judgment All not B is C we are able to add the exclusive statement No B is C. But this is a merely *a priori* judgment drawn from the general logical principle that co-ordinate species are distinct, which again is a corollary of the law that the individual cannot be predicated, for co-ordinate species are related to each other as individuals.

The knowledge that we have discovered two classes within our genus is dependent on the proposition that 'No B is C,' but not only on this but on the fact that B and C carry with them peculiar properties, so that in virtue of this statement as premiss we can go on to deny DEF, etc., which are properties of *c*, of B. It is obvious that 'No B is C' must be indemonstrable, *e.g.*, that no lake fish, belonging to genus A, inhabit the streams (= F), or though we may appear to prove it through the fact that they feed on a species of insect found only in lakes, we must have previously explained this fact by their being in the lakes. Or, to put the matter in another light, we may prove that No B is C by assuming that No B is D, but this negation has to be itself derived from 'No B is C'. We must select one of those negations as an ultimate premiss, and we should take as the terms of our ultimate those properties which seem to be the cause of the subsequent differentiations. The negation No B is C is indemonstrable (just as the definition, B is B*a*, is indemonstrable).

Thus we see that when we have two terms B and C each involving along with it a number of attributes in such a way that by denying B and C of each other we are able to deny of the other the attributes involved in each, we are entitled to raise B and C into the distinguishing marks of species. When once this has been done it is merely going over old ground again to deny the properties of one class of the other. Now it is when B and C are regarded as specific differences that the *modus ponendo tollens* is valid, but when valid it is valueless. "Red fleshed trout are lake-dwellers, therefore they are not to be found in the streams." This is true, but is based upon the mutual exclusion of classes, whose distinction had already been justified by the difference of their properties.

There are cases of disjunction in which we are not specifying the various classes which fall within a genus and in which it would yet appear that we might draw a valid conclusion from them by the *modus ponendo tollens*. But in all such cases the mutually exclusive predicates must be known to be incompatible with each other in virtue of some principle antecedent and superior to the particular science which deals with the subject of predication. The predicates must be specific differentiations of a wider reality. Thus we may say, 'Planetary orbits fall either wholly inside or wholly outside the earth's orbit'. We can therefore infer, if we care to take the trouble for such a trifling purpose, that Jupiter's orbit, lying without that of the earth, cannot lie

wholly nearer to the sun than it. But our exclusive major premiss in virtue of which we drew our conclusion was founded on the fact that outside and inside are specific differentiations of spatial relations, that nothing which is out is in. The exclusive force of our disjunction is then indirectly *a priori* and built upon the logical principle of individuation, and is of no particular interest to the science of astronomy; the real force of the disjunction lies in its exhaustiveness, the denial that there are any planets with orbits intersecting that of the earth.

Contrast the statement—"Planets whose orbits lie between the earth and the sun are, when visible, to be seen either in the morning or in the evening". Now there is no general self-evident principle which states that a heavenly body visible in the morning is not, during the same period, visible in the evening. The incompatibility of these two predicates has to be deduced from the nature of the particular subject treated of—planets between the earth and the sun. But we may very well make and employ the above disjunction without possessing this proof, without knowing that Venus, when visible in the evenings, must rise after the sun and be lost in his light in the morning. Hence we see that the force of the disjunction lies in its exhaustiveness, while the exclusiveness, if present, depends upon the predicates involved in each case.

A classification is of value chiefly for its exhaustiveness. It is a predication of the properties of a genus taken concretely. As such it is an ideal of science and like the predication of property, that with which science may rest content. But for the practical life it is the starting-point of activity; it is the possession of this kind of knowledge which the practical life desires. We wish to know the whole number of types into which a genus is divided, so that we may have confidence when to expect to find the qualities common to the whole class. For example, we wish to know the complete tale of the ores of iron so that in our prospecting we may know what substances to collect and test if we are investigating the possibilities of iron mining in a certain district. It is not sufficient to know that the particular ore (B) is iron-producing (A) and that C, D and E fall under the same category. What we wish to be sure of is that the list is exhaustive, that all not-B is C D or E, and all not-C is D, E or B. The specific difference of each of the various sorts of minerals may be taken for granted, but to assert it is not the purpose of a judgment of this kind. Again, if we cannot identify a certain species with any of the members

into which a class is divided, we may infer that it has not the peculiar properties of this genus. Here once more we have in view only the exhaustiveness of the division. And with this I may conclude my argument, which goes to show that the function of the disjunctive judgment both in science and in practical reasonings is to be exhaustive and not necessarily exclusive.

V.—DISCUSSIONS.

NOTE ON THE PHILOSOPHY OF A SUPPOSITION.

SUPPOSITION may be defined, perhaps it would be more accurate to say it may be described, negatively, for the purposes of this paper, as a conception that is not taken to be true. The criterion of truth in the sense in which "truth" is used here is the ordinary one of agreement with facts. The phrase "not taken to be true" is intended to include not only conceptions that go beyond what is known, and in that sense are not taken to be true, but also conceptions that are at variance with what is known, that is conceptions that are known to be false, which obviously are not taken to be true: in other words, conceptions that are *not known to be true*, and conceptions that are *known not to be true*. The knowledge of opposites is one, and the opposite of supposition, as used here, is a conception that is taken to be true. The difference therefore between suppositions and other conceptions is the way in which they are viewed in relation to facts.

Suppositions as here used may be divided into two classes:—

I. Suppositions made for their own sake—suppositions that have their ends within themselves.

II. Suppositions made for some other reason—suppositions that are made for the sake of some extrinsic end, in relation to which they are *means*.

Putting on one side for the moment the first division—the suppositions that are ends in themselves—the second division—the suppositions that are means—may be subdivided teleologically, in relation to the ends they subserve. So divided, they fall into two classes:—

1. Practical suppositions framed for the guidance of action, the end of which is the good. By the good in this connexion is meant not the ethically good, but the psychologically good, in other words not only what *ought* to be desired, but what can be desired.

2. Speculative or scientific suppositions framed to help in the attainment of truth, the end of which is, of course, the true.

It would be unreal to insist on making these divisions quite mutually exclusive. In many cases a supposition may have more aspects than one, and in these cases it should be classed according to the aspect that predominates. The importance of regarding

suppositions teleologically is that the construction and the development of the ideal content of the supposition is determined throughout by the end it subserves, whether that end be immanent or extrinsic. This appears if each of the classes mentioned is considered a little more closely. First, as to suppositions that have as their end the good, or, what are called here, practical suppositions; a supposition framed for the guidance of conduct is an ideal forecast of the result of following a certain line of action. Out of this arises one great limitation that attaches to practical suppositions: they deal only with the future. Practical thought so far as it is practical never looks back. The irrevocableness of the past makes thought about the past speculative, not practical.

> The moving finger writes and, having writ,
> Moves on. Nor all your piety nor wit
> Can lure it back to cancel half a line,
> Nor all your tears wash out a word of it.

Regrets are vain things; from the point of view here in question, that is final. The tears that are shed over spilt milk are idle tears, though it may well be that, from the speculative point of view, their uselessness is an added sorrow. The future is the province of practical suppositions, but within this province practical suppositions are further circumscribed by a limitation that makes the area proper to them but a small part of the future. The aspect, under which they regard the future, is the future as it can be controlled or modified by the agent. Man can enter into the future as an influence of change only along the lines of the practicable, and in relation to a given man, at a given moment, the lines open must ever be very limited. About the impracticable there is no deliberation, and this limitation attaches to the suppositions under consideration, as forming part of the mechanism of deliberation. Looking along the lines of action open to him, the agent in reflective choice may go over the possibilities, and say to himself, If I do this, the results will be so and so; if I do that, the results will be so and so. This is the formula according to which such suppositions are made. When the suppositions are allowed to develop into their results, the agent may guide himself, wholly or partially, by the contemplated results, as to which supposition he will make actual. In determining practical judgment the development of each supposition will have value according to its reality and comprehensiveness.

Games of skill illustrate well the function of a practical supposition. In a game of chess, for instance, the player has his choice of a certain limited number of moves. So far as it is rational, his choice is determined by forecasting the results of each move and making the move that promises best. There is a struggle for existence, as it were, amongst the possibilities, the possibility finally actualised is reached through a series of rejected suppositions. The framing, developing, and valuing of the supposition in

relation to action seems to be most consciously done when one is a beginner or lacks skill in the department of action in question. With skill or experience the process is less and less consciously gone through. Great skill or great experience probably leads to almost instinctive judgment.

Practical suppositions belong to the intellectual aspect of action. It is not intended to overemphasise this aspect. Energy and decisiveness, for example, tell more perhaps in action than insight. Even when insight is fully present, the life of action involves a great many leaps in the dark: the data for insight to work on are often wanting, it is a mere chance whether the event be brilliant success or disastrous failure. Life is only in part a game of skill, chance has always to be reckoned with, even when the game is most quietly played. The courage to play for great stakes is an element in greatness, but often it has no more to do with intellect than the gambler's cast of a die.

In giving an account of practical suppositions in relation to action, it may be well to notice a limitation to their availability on theoretical grounds in certain cases in which their use might otherwise seem appropriate. In moral action on the doctrine that morality is intrinsic, and not dependent on consequences, practical suppositions *ought not* to determine conduct. But admittedly on this theory of ethics, morality leaves many things indeterminate, and in relation to them appeal to expediency is legitimate. No one, as has been pointed out, can say that consequences are irrelevant in ethics who allows, as all intuitionists do, that prudence is a cardinal virtue. Not only so, but intuitional moralists allow that outside the class of cases where action may be legitimately guided by expediency, and even where consequences do not determine morality, they may rightly be used as a *test* of the intrinsic character of action, when the direct determination of the intrinsic character presents difficulties. By their fruits you shall know them is *a* principle, though not *the* principle of intuitional morality.

Taking up next suppositions that are made for the attainment of truth—suppositions that are means in relation to the end, truth. A supposition of this sort has a well-recognised name of its own: it is called a hypothesis. Hypotheses may be divided into two classes on an important principle of division pointed out by Mr. Venn in his *Empirical Logic*. In knowledge of truth there may be advance in either of two ways, as a logician would say, by way of extension or by way of intension. To put the same thing less technically, advance in truth may be made by addition, *i.e.*, knowing more, or realisation, *i.e.*, knowing better.

Hypotheses directed towards the realisation of truth are called by Mr. Venn, *Illustrative*.

Hypotheses directed towards the discovery of truth are called by Mr. Venn, *Constructive*.

Illustrative hypotheses deal with the application of known principles. They are used in teaching ourselves or others the

meaning of the known. Constructive hypotheses are simply guesses at unknown principles. Their great function is as an instrument in discovery.

Illustrative hypotheses and constructive hypotheses are subject to different conditions. And once more it will be found that the conditions that attach to the suppositions under discussion arise from the ends they respectively subserve.

Illustrative hypotheses, because they aim merely at illustration, may not only go beyond truth, but even against truth, or against possibility. In the teaching of physical science, for example, untrue and impossible suppositions are freely used. Thus, in explaining the principle of the pendulum, a teacher might say if the pendulum is swung under certain conditions, in a perfect vacuum, and so that there is no friction, it will swing for ever, though the complete removal of air, and the complete removal of friction are alike physically impossible. Again, the present writer has heard Sir Robert Ball, in an astronomical lecture, when speaking of the fact that the transmission of light is not instantaneous, but takes a certain time, make the supposition that if an observer were to recede from the earth more rapidly than the rate at which light travels, that observer would see the events of the earth's history repeat themselves but repeat themselves in an order the reverse of actual occurrence, in other words, backwards. This couple of examples will sufficiently remind the reader how little regard to truth or practicability illustrative hypotheses need pay. An illustrative hypothesis is not limited even by the metaphysical conditions of the possible. Thus in a treatise on Ethics written from the scholastic standpoint, the student may find an illustrative hypothesis of this sort: If God had not commanded men to do what is right, what obligation would attach to the natural law? The 'if' here introduces a supposition that the writer of the treatise regards as at variance with metaphysical possibility. But this in no way prejudices it as an illustration. An illustration, if it is to illustrate, should be quite clear and definite, but it need not be and is no better for being a fact. There may be much virtue in an "if" even if that virtue is not truth.

Constructive hypotheses, the second subdivision of suppositions that have truth as their end, are subject to much more stringent conditions. A constructive hypothesis is a guess at the truth. It is a tentative assumption made in the hope that it will turn out to be true. And from this arise the conditions of a valid hypothesis as they are laid down in logical text-books. Truths must be in harmony with themselves and with each other; they must be, as it has been put, internally and externally consistent. A constructive hypothesis unlike an illustrative cannot be at variance with possibility. What is impossible cannot be even provisionally taken as true. A constructive hypothesis unlike an illustrative cannot be at variance with fact: truth must be in harmony with truth. A supposition made in the hope that it will turn out to be a truth

must have these characteristics of truth; that it is possible in itself, and compatible with other truths. An untrue or an impossible supposition may lead to the discovery of truth, but not directly. If the alternatives are limited, to show that one or more is untrue or impossible is a help as limiting investigation, and may lead to the truth if only one alternative is left not disproved. Every indirect proof is an example, as Ueberweg points out, of reaching truth by way of a false supposition. The extensive use of indirect proof shows that when error is conceived clearly enough to be developed into its consequences it tends to its own destruction: as Bacon says, truth will sooner come out of error than out of confusion.

The last class of suppositions to be considered is suppositions that are not made as means, but for their own sake—their ends are immanent. Examples of suppositions of this sort are to be found in what may be called artistic suppositions—that is suppositions that are made and developed, because they appeal to the sense of beauty, the sense of humour, or what other feeling prompts to artistic activity. And in order to be true to facts, artistic supposition in this connexion must be taken widely enough to include not only artistic masterpieces, but the humblest efforts of the creative instinct, even a passing fancy that never finds expression; because, philosophically, the explanation of the crudest narrative that a child ever told its companion, prefaced with the magic words "once upon a time," or the idlest day dream, gone almost before its presence is realised, and the finest story in the world, is the same. To prevent misapprehension it may be well to remind the reader that it is the theory of a supposition this paper is concerned with, not the theory of art. Not every product of artistic activity is a supposition. A supposition is representative in character. Some of the fine arts are not even apparently representative: neither architecture nor music, for example, are representative arts. But while the philosophy of a supposition and the theory of art are two things, does not the foregoing discussion seem to throw some light on two theories of representative art, the theory of realism, and the didactic theory? The element of error in realism is in making the artistic supposition a means to the scientific end, truth. The element of error in didactic art is in making the artistic supposition a means to the practical end, good. The artistic supposition, the practical supposition, and the scientific supposition are three things, subject to different conditions, and to the extent to which they are identified, there is error. The true, the good, the beautiful may in last analysis be connected intimately, but suppositions framed in view of the true, the good, the beautiful are different, they are subject to different conditions, and developed according to different laws.

W. JEFFREY WHITE.

NOTE IN REPLY TO MR. A. W. BENN.

I SHOULD like to take this opportunity of saying a few words in answer to Mr. A. W. Benn's 'Note in Reply' to myself which appeared in MIND, N. S., No. 46. In doing so I will confine myself, not merely for reasons of brevity, to the 'business' part of Mr. Benn's note, to the exclusion of the quips and cranks from Molière, Sheridan, and Dr. Johnson which may be called its 'limbs and outward flourishes'. To begin with I think I may reasonably protest against Mr. Benn's general description of my attitude towards himself in the article of which he complains ("On the First Part of Plato's *Parmenides*," MIND, N.S., 45). According to Mr. Benn I have tried 'to discredit him in public estimation by citing a number of alleged inaccuracies and oversights from his own article in MIND, N.S., 41. I submit that Mr. Benn's complaint does me an unconscious injustice. I certainly did call attention to some statements in Mr. Benn's article which I thought, and still think, inaccurate; but with the object, not of 'discrediting' Mr. Benn, but of getting a hearing for my own views. To have made a mistake or fallen into an oversight can hardly in itself be regarded as 'discrediting' any man except one who formally claims infallibility, a claim which I do not understand Mr. Benn to advance. Mr. Benn's reputation as a brilliant and suggestive expositor and critic of the Greek philosophers is too securely founded to be seriously endangered by the detection of a few inaccuracies in his work. And now as to the particular allegations of my article to which Mr. Benn takes exception.

(1) I spoke of Mr. Benn's statement that Parmenides identified space with pure reason as a remarkable assertion; Mr. Benn says he does not know to which of the implications of this sentence I object. I will do my best to inform him. I object (*a*) to the anachronistic term 'pure reason' (in which of many conceivable senses, by the way, does Mr. Benn mean the adjective to be understood?) as a translation of Parmenides' *νοεῖν*. Such a translation has no meaning except such as it derives from the epistemological distinction between the processes of reasoning and sensation, a distinction which does not make its appearance in Greek philosophy for at least a generation after Parmenides, and possibly not till later. As Theophrastus very properly says of Parmenides, with explicit reference to Fr. 146 ff., *τὸ γὰρ αἰσθάνεσθαι καὶ τὸ φρονεῖν ὡς ταὐτὸ λέγει*

(*De Sensibus*, § 4, Diels, *Doxographi*, p. 499).[1] That Parmenides notoriously held that our own senses deceive us in the picture of existence they present to us is no justification for attributing to him the much more developed doctrine of a source of knowledge radically different in kind from sensation. At best his poem contains the merest germ of epistemological dualism (see Burnet, *Early Greek Philosophy*, p. 189 ff.). (*b*) Next I object to "space" as an equivalent for the Parmenidean 'Being'. With Burnet and Bäumker, to mention no other names, I hold that Parmenides is perfectly serious when he speaks of his "Being" as a *plenum* (Fr. 80) and as in stable equilibrium (Fr. 106), and I maintain therefore that the true name for it in English is not "space," but "body". If Mr. Benn really disputes this I should like to ask him, first, how he translates the expressions πᾶν δ' ἔμπλεόν ἐστιν ἐόντος, and εὐκύκλου σφαίρης ἐναλίγκιον ὄγκῳ, μεσσόθεν ἰσοπαλὲς πάντῃ, and next what the "not-Being" of which Parmenides will not allow us to speak or think can be, if it is not precisely extension as distinguished from the body that is extended? The passage from Gomperz to which Mr. Benn refers appears to me for one thing to have no bearing at all on the question whether the Parmenidean 'Being' is or is not space, as distinguished from body, and, for another, to involve in virtue of its allusions to Spinoza one of those brilliant but misleading analogies to which, if I may say so, Gomperz is even more addicted than Mr. Benn himself. (*c*) Finally, I object to the statement that Parmenides "identified" space and reason as implying a false and impossible piece of translation. An "identity philosophy" in the days before the recognition of mind and body as two superficially distinct realities would have been an unthinkable anachronism. So long as body was the only reality of which philosophy knew, there was as yet nothing for the 'identity philosophy' to identify. My view in short is that Parmenides could not have held that "consciousness" and physical processes were aspects of an identical substance, just because he held, as Theophrastus carefully explains, that the processes of consciousness *are* themselves physical. And as for the Greek, I submit that Zeller and Burnet's translation of the famous τὸ γὰρ αὐτὸ νοεῖν ἔστιν τε καὶ εἶναι, "it is the same thing that *can be thought* and can be," is the only version that is even possible, if we pay proper regard to the idioms of the philosophic Greek of the fifth century.

(2) My next point was that Mr. Benn's language about the

[1] Mr. Benn refers to the Theophrastus passage in connexion with the second of my alleged instances of oversight, but dismisses it as 'relating not to knowledge but to sensation' (MIND, N.S., 46, p. 236). The distinction in any case would be of doubtful value in dealing with philosophers who, as Aristotle tells us, τὰ ὄντα ὑπέλαβον εἶναι τὰ αἰσθητὰ μόνον, and its relevancy in the special case of Parmenides is excluded by the express words of Theophrastus himself, supported as they are by direct citation from Parmenides' poem.

"unanimous tradition of Greek philosophy that like can only be known by like" implied forgetfulness of "the rival doctrine of perception by opposites hinted at by Heracleitus and worked out by Anaxagoras". Mr. Benn concedes the point about Anaxagoras, which was what I was principally concerned to maintain, so that I might fairly claim to have been, by his own admission, justified in my criticism. He adds however (*a*) that perception is not knowledge, and (*b*) that a doctrine of perception by opposites is irreconcilable with the main principles of Heracleiteanism. To these arguments I would briefly reply (*a*) that if anything is certain about the early physiologists, to whom both Mr. Benn's remarks and my own criticisms had special reference, it is certain that they at any rate made no distinction between τὸ αἰσθάνεσθαι and τὸ φρονεῖν, and (*b*) that I neither asserted nor implied that the doctrine of 'perception by opposites' is compatible with the general principles of Heracleiteanism. What I said was that the doctrine was 'hinted at' by Heracleitus, and in saying so much I was thinking partly of the passage in Theophrastus *De Sensibus*, as Mr. Benn rightly conjectures, partly of the implication of such passages as Frag. 39, 60. I gather that Mr. Benn does not dispute the accuracy of my statement as far as it goes; his further demonstration, that I should have been guilty of an absurdity if I had gone on to say something else which I did not say (*viz.* that "perception by opposites" is compatible with Heracleiteanism as a whole), thus constitutes a mere *ignoratio elenchi*, and as for "Mr. Taylor's theory of Heracleiteanism," Mr. Benn will see, if he will look at my article again, that it contains *no* theory of Heracleiteanism, good or bad.

(3) We come next to the difficulty I raised about the reconciliation of some remarks of Mr. Benn (*op. cit.*, p. 40, note 2) with *Sophistes* 245 d. And here I am afraid that each of us has misunderstood the other. At least I am sure Mr. Benn has strangely misunderstood me, and it also appears from his present explanation that I have misunderstood him. What I took Mr. Benn to mean by his footnote was that "all reality as such is necessarily imperfect," a doctrine of Vacherot which he there quotes as "a remarkable parallel to his (*i.e.*, Plato's) position". Now I understood Mr. Benn here to mean by "reality," "actuality in the world of τὸ γιγνόμενον," and by "perfection" metaphysical perfection, complete systematic structure. Accordingly I quoted in comment the statement of the *Sophistes* that "whatever is actual is actual as a whole" (γέγονεν ὅλον), a proposition which I understand to imply that all actual existence partakes to some degree of metaphysical perfection, and to be quite inconsistent at any rate with the view that nothing actual is perfect and nothing perfect actual. In his reply Mr. Benn (*a*) mistranslates, as I believe, the passage in question. He renders γέγονεν ὅλον by 'exists wholly,' 'is in itself complete,' a tolerable version so far as the mere words go, and then proceeds to paraphrase this by "it either is or is not".

I venture to submit that the interpretation is impossible both on linguistic grounds and in view of the context. Would Mr. Benn maintain that, *e.g.*, ὅλον τι ἐστὶ τὸ A is Greek for the law of Excluded Middle? And how could Plato pass from the assertion that whatever is either is or is not to the conclusion that, if this is denied, quantitative and numerical propositions become unmeaning, οὐδ' ὁπόσον τι δεῖ τὸ μὴ ὅλον εἶναι, κ.τ.λ.? What has Excluded Middle to do in particular with number? (*b*) Next Mr. Benn goes on to argue against the proposition that all existence is perfect, a proposition which may no doubt be interpreted in a sense which makes it a manifest absurdity. But what Mr. Benn has to show, if his original statement is to be justified, is not that some existence is imperfect, but that all existence is necessarily (for Plato, that is) imperfect, and this is just what he does not attempt to prove.[1] At the same time, I confess that my own formulation of my objection to his theory was obscurely expressed. What I meant to hint at, and ought to have made clear, is the essentially erroneous character of the attempted identification of the Platonic concept of γένεσις with Descartes' 'existence'. The difference of meaning between the two is so wide that whether you affirm or deny that Plato agrees with Descartes that perfection implies existence, your statement is in either case inevitably bound to be more or less unintelligible.

(4) My most serious criticism however is dismissed by Mr. Benn in a fashion which might fairly be said to amount to a tacit admission of its reasonableness. I still say that if Mr. Benn is serious in maintaining the elimination of the transcendent Idea from the later Platonism, he is bound to show how his version of Plato can be harmonised with the emphatic declarations of *Timæus* 51 b-52 a. This task Mr. Benn up till now declines to execute, and offers no reply to the request for its execution beyond a perfunctory reference to the difficult passage (*ibid.*, 35A) about the construction of the World-Soul out of the Same and the Other. Now I maintain that whatever the real meaning of this famous *crux* may be, it is a first principle of rational exegesis that we should proceed from the straightforward and unambiguous language of such passages as 51-52, and not from the most difficult and most ambiguous passage in the whole *Timæus*, as a basis for our interpretation of the dialogue. Indeed it is not even to be assumed without proof that reference to the passages about the composition of Soul is relevant in a discussion of the statements about the problem of the being of Ideas and their relation to sensible existence. But I must reserve further discussion of the meaning of the passage *Timæus* 35 A for a more suitable opportunity. Meanwhile I will only say that Mr. Benn is hardly entitled to assume that it is impossible that I should hold Dr. Jackson or Mr. Archer-Hind capable of making a mistake.

[1] Contrast *Timæus* 92 B. μέγιστος καὶ ἄριστος κάλλιστός τε καὶ τελεώτατος γέγονεν.

(5) Mr. Benn has in his 'Reply' done me the service to call attention to another example of his methods of interpretation, of which I took no notice in my article for a very simple reason. In that article (p. 39) he said that Plato confessed to never having met a mathematician who could reason. I made no comment on this for the adequate reason that I remembered nothing in Plato quite like Mr. Benn's statement, and had no notion to what passage he might be alluding. He now alters "never" into 'hardly ever,' and supplies the reference to *Rep.* 53 b. But on referring to the Greek I find that what is actually said there is simply that the education of the philosophic ruler must not stop short at mathematics, because very few mere mathematical specialists (οἱ ταῦτα δεινοὶ) are dialecticians. The exaggeration which transforms the reasonable proposition that few mathematicians are finished metaphysicians into the sweeping charge that hardly any of them 'can reason' is Mr. Benn's.

(6) I shall not take up much space in replying to Mr. Benn's concluding strictures on my own articles. I trust Mr. Benn will allow me to say that he is quite mistaken in supposing that I was 'displeased' at his silence about my former articles on the *Parmenides*. I mentioned his silence and the inference I had drawn from it simply to show that controversy between us as to the meaning of the second part of the dialogue would probably be fruitless. As it appears from what he now says about my earlier articles that my interpretation of his silence was quite correct, I do not see why he should object to my remark about it. Next as to my present paper. May I suggest that Mr. Benn has no right to dismiss my interpretation with the comment that 'equations to curves' are 'entirely outside Plato's ken,' unless he is prepared also to maintain that the fundamental conception of a curve as a *locus*, *i.e.*, as an assemblage of points fulfilling a specified condition, is also entirely out of Plato's ken? The equational form is simply a convenient way of expressing this conception of a locus, and if we once admit that the concept of locus was within the ken of Plato and his contemporaries the anachronism involved in speaking by way of illustration of the 'equation to a circle' is not greater than that which we commit when in translating an arithmetical passage from Greek we substitute Arabic numerals for letters of the alphabet. As for my "marvellous commentary on Zeno's argument about the ὅμοια καὶ ἀνόμοια," I must point out, even at the expense of spoiling Mr. Benn's borrowed jests, that my interpretation was *not* "got out of two words," but was put forward as a conjecture based on what we know of the general character of Zeno's anti-Pythagorean polemic and of the views against which it was directed. We know that the problem of continuity was one which occupied Zeno in the very work from which Plato is quoting, and we have every reason, as Prof. Gaston Milhaud has shown, to believe that it was the discovery of incommensurables which forced the problem of continuity upon the attention of Greek thinkers. I believe therefore

that my tentative explanation has at least the merit of connecting the passage of Plato with the known topics of Zeno's work against the Pythagoreans, and I may also, I think, add in defence of it, that, if it is right, it at least gives a definite meaning to what the editors of Plato in general have been content to leave unintelligible. I do not say my interpretation is proved to be correct, but I do contend that it is in keeping with all we know of Zeno from Aristotle and Simplicius, and turns on a point which was bound to arise in connexion with the problem of incommensurables. If it is to be proved wrong, the proof will have to be furnished not from Molière but by the production of a simpler interpretation. In conclusion I would only say further that I sincerely deprecate the suggestion of patronage conveyed by Mr. Benn's reference to "poor Maguire," which I trust was unintentional.

A. E. Taylor.

VI.—CRITICAL NOTICES.

Human Personality and Its Survival of Bodily Death. By Frederic W. H. Myers. 2 vols. Longmans, Green & Co., 1903.

These two large volumes, containing 1,360 closely printed pages, present in final form the results of the life-long research of the late F. W. H. Myers. This research, to which Myers devoted his great capacities with an admirable and steadily glowing enthusiasm, was concerned with the problems at once the most obscure and the most momentous that the human mind can legitimately hope to solve, the problems of the nature of man, of his survival of the death of the body, and of the existence of a world of purely spiritual beings. Books dealing with these subjects are of course common enough, and the peculiar interest attaching to Myers' researches arises, not from the nature of the problems discussed, but from the nature of the methods by which he attempted a solution of them. He was the first, though assuredly not the last, to apply to these problems persistently and consistently the inductive methods of modern science; and this fact alone, even if the final outcome of the inquiry should prove entirely negative, must entitle him to a permanent place in the history of man's intellectual development. Hitherto the belief in a future life has been a matter of faith: Myers sought to make it a matter of knowledge. And he rightly believed that this inquiry is one of supreme interest to that small part of the human race which wishes to know and to understand. "Could a proof of our survival be obtained," he wrote, "it would carry us deeper into the true nature of the universe than we should be carried by an even perfect knowledge of the material scheme of things. It would carry us deeper both by achievement and by promise. The discovery that there was a life in man independent of blood and brain would be a cardinal, a dominating fact in all science and in all philosophy. And the prospect thus opened to human knowledge, in this or other worlds, would be limitless indeed." With this estimate of the importance of the discovery contemplated we must all agree, whether, as Myers did, we ardently long for its achievement, or rather feel that proof of the survival of our personality after death would snatch away from us the sure hope of ultimate extinction, the certainty of a final and

unending sleep, and would fix once more upon our necks the yoke of that vague dread before the ills we know not of, which mankind has seemed to be slowly and painfully sloughing off.

There is of course a large class of persons of intellectual habits to whom the pursuit of "the doctrine of the enclitic *De*" or the classification of the varieties of the common Trilobite may seem an all-sufficient mental exercise. But even to them Myers' work should in some degree appeal when it is pointed out that its results may be of most intimate and practical importance to each one of us during our life on earth. For if Myers' conclusions are in the main well founded, we shall have to admit the reasonableness of the doctrines of the Christian-scientists, and each one of us may set about the regulation of his life by methods allied to theirs, with good hopes of great practical benefits to himself and to the world in general.

The formation of a decided opinion as to the success or failure of Myers' main contention, the survival of the personality after death, must be postponed, probably for a whole generation at least, and indefinitely longer if the Society for Psychical Research, or other societies of similar aims, should fail to carry on its work by the scientific methods employed by Myers, Sidgwick and Gurney, and in the critical spirit which they displayed. At present the main strands in the rope of evidence are too few to permit us to cast ourselves upon it with confidence. For if one of those seemingly sound strands should prove worthless, the rest would not bear the weight of our belief. To illustrate my meaning, let me imagine for a moment that it could be shown that Myers himself was a well-meaning but unscrupulous fanatic (a thing I do not in the least suspect or wish to suggest) bent upon leading us back at all costs to the ancient forms of religious bondage. In that case the whole evidential rope would be fatally weakened.

The book is so rich in matter presented with so much skill that for its adequate criticism a large volume would be necessary. Already a number of men of the highest distinction and of the most diverse intellectual pursuits have given us their appreciations and their criticisms. But for the psychologist one obvious task remains, a critical examination of Myers' doctrine of the "subliminal Self". For this doctrine is not only a prominent part of Myers' argument for the reasonableness of the belief in the survival of the personality, but is, if true, a novelty of the first importance for the science of psychology. Of this conception Prof. James has given a sympathetic account, and has stated that by it Myers "colligated and co-ordinated a mass of phenomena which had never before been considered together". Sir Oliver Lodge has recorded his opinion that it is "a good working hypothesis" and a "great conception". Prof. Flournoy has declared it to be "extremely remarkable and worthy of the serious attention of even official and university psychologists". Mr. Mallock has condescended to misrepresent it, and Mr. Andrew Lang has abundantly

demonstrated the fact. But so far as I know, no one has undertaken a critical examination of the hypothesis of the "subliminal Self" as it is finally presented by its author.

First let us note the important place which this hypothesis was designed by Myers to fill. It was his prime object in writing this book, not merely to detail the evidence for survival, for that had already been done for the most part elsewhere, but to present it in such a way that the new knowledge, as he deemed it, should be in continuity with the old, that it should appear reconciled to, or harmonised with, the general body of accepted scientific truth, and especially with the well-founded conclusions of modern biology and psychology. Now the belief that a man's personality can survive the death of his body implies that that personality is, or is the manifestation of, some entity that is capable of living and manifesting essentially similar forms of activity, namely, thought, feeling and emotion, when its relations with the body are destroyed by the dissolution of the latter. On the other hand, modern biology has taught us to regard the body as an aggregation of individuals and its activities as the resultant of the co-ordination of the activities of these individuals. And many thinkers have felt themselves compelled to assume that each of these units has in some degree its own psychical life, and that the psychical life of man, including all that we mean by personality, by the Self, is but a co-ordination into a systematic whole of these minor psychical lives. This doctrine, whether under the form of "atomistic hylozoism" or "multiple monadism" (to use Prof. James's expressions), Myers accepts, and he rightly points out that the recent demonstrations of divided personalities acting in and through the one body support this view. Myers then believes that both these views must be accepted; he asserts with M. Ribot that "the Self is a co-ordination," and with Reid that the Ego is a permanent unity, and he sets himself to effect "a reconcilement of the two opposing systems in a profounder synthesis". The profounder synthesis is to be effected by aid of the hypothesis of the "subliminal Self". This conception is too unfamiliar, too subtle, and too profound to be set forth concisely in words. Myers, therefore, nowhere attempts this feat, but strives to introduce the conception to our minds by displaying in successive chapters what he believes to be the manifestations of the "subliminal Self". But it is shadowed forth by the statement that the term subliminal is used to "cover *all* that takes place beneath the ordinary threshold" of consciousness, "not only those faint stimulations whose very faintness keeps them submerged, but much else which psychology as yet scarcely recognises; sensations, thoughts, emotions, which may be strong, definite, and independent, but which, by the original constitution of our being, seldom emerge into that *supraliminal* current of consciousness which we habitually identify with *ourselves*".

In passages scattered throughout the book we learn that Myers accepts "the old-world conception of a *soul* which exercises an

imperfect and fluctuating control over the organism" and that he conceives that control to be exercised along "two main channels, only partly coincident—that of ordinary consciousness, adapted to the maintenance and guidance of earth-life; and that of subliminal consciousness, adapted to the maintenance of our larger spiritual life during our confinement in the flesh". We learn also that by the subliminal channel the soul pours spiritual energy into the body and that it "keeps the body alive by attending to it" (subliminally); that the "subliminal Self" is stratified, and that while its strata are of very different degrees of worth, the higher strata are of a nature to deserve our profoundest admiration. It appears that the two series of states of consciousness, together with two continuous chains of memory, and the two forms of activity of the soul which generate them, as it exercises control over the organism through subliminal and supraliminal channels, constitute the subliminal and supraliminal selves respectively. These two selves are separated, not completely, but only partially by an imperfect diaphragm, as it were, of which the permeability varies greatly in different individuals. The two channels through which the soul exercises this dual control seem to be two systems of nerve-centres, and in both systems we must distinguish a hierarchy of lower-, middle-, and upper-level centres. In the glimpses of the "subliminal self" which we most frequently get, it appears strangely limited in intelligence, incoherent and even false, but this is because we are then witnessing the working of the soul through "middle-level subliminal centres only," and in spite of this we must regard the "subliminal self" as on the whole vastly superior to the supraliminal self; as Sir Oliver Lodge has it, "the subliminal is probably the more real and more noble, more comprehensive, more intelligent self," and above all, as Myers constantly tells us, it is the more profound of the two, higher in the evolutionary scale, and more permanent.

In attempting to grasp the meaning of all this and to discover in what way the mass of phenomena described by Myers justify this hypothesis, it is well to have before our minds the various conceptions of subconscious or unconscious mental factors that are current among ordinary psychologists. The term 'the Unconscious' made, of course, a considerable figure in metaphysical systems of the earlier part of the last century, and about the middle of that century it appears to have been taken over by the psychologists from the metaphysicians. For it had by that time become clear that it is impossible to give a complete and connected account of mental life in terms of states of consciousness only. But the conception of the unconscious has assumed very diverse characters and very different degrees of importance in the hands of different psychologists. We may distinguish in the first place (1) physiological processes having no immediate psychical correlate or effect; (2) physiological processes with accompanying psychical effects which are states of a secondary or subsidiary consciousness and which remain separate

and shut out from the primary consciousness. The occurrence of such secondary consciousness, or consciousnesses, which were postulated many years ago by von Hartmann and by him distinguished as the "relatively unconscious," has now been proved (so far as inference can prove any consciousness other than my own) by modern studies in psycho-pathology, especially those of M. Pierre Janet. As regards the secondary consciousness the main point in dispute is as to its extension. While M. Janet would assign an independent fragment of secondary consciousness to every relatively independent form of nervous activity, even to such processes as the purely spinal reflex act, and while von Hartmann, though denying it to these simplest kinds of nervous activity, regards it as constantly accompanying the activity of groups of nerve-cells of rather greater complexity, others prefer to assume its occurrence only where we have some ground for immediately inferring it, namely, in certain abnormal states, hysterical and somnambulic. (3) A third conception of an unconscious factor in mental life is that of psychical activities as distinct from psychical products, the states or phenomena of consciousness. This is von Hartmann's 'absolutely unconscious' which has fallen into so much disrepute. Yet, as von Hartmann shows, the conception is current with many psychologists, and indeed unless we are prepared to regard consciousness as a mere epiphenomenon (in the sense of Huxley) we must I think admit the validity of this conception. Thus when I look at an object on my table its distance from me is given at once to consciousness; yet we know that this state of consciousness results from a highly complex series of processes. Or again, when I lift in turn two perceptibly different weights in order to compare them, the judgment "lighter" or "heavier" is given immediately to consciousness as I lift the second weight; the state of consciousness expressed by the phrase "this is heavier" is a product of an activity which lies altogether outside consciousness. The same holds true of far more complex states, if not of all, and as we ascend the scale of complexity it becomes increasingly difficult to postulate a physiological activity adequate to the production of the state of consciousness.

(4) We have the concept of the Subconscious as presented by Prof. Ward. A presentation may persist with an intensity so feeble that it is no longer capable of diverting the attention to itself or of being voluntarily attended to. This is the basis of that doctrine of the Subconscious which refuses to accept the physiological explanation of the facts of mental retention and regards the mind as a vast storehouse of such subconscious presentations, each of which may, under favourable conditions, be so intensified that it rises again above the threshold of consciousness, as a dully glowing spark may be fanned into a flame.

(5) The secondarily automatic processes, complex activities originally carried out with attentive consciousness, but after many repetitions performed apparently without consciousness of any

kind. These processes we must regard either as purely physiological, or as associated with states of secondary consciousness only.

(6) We have the undiscriminated or marginal sensations which are sometimes spoken of as subconscious states.

All these are legitimate and defensible conceptions, but they are distinct from one another, and seem to be to some extent incompatibles. Yet, as might be shown by a series of quotations, each one of these (with the exception possibly of the first) is in turn accepted and presented as an aspect or mode of the "subliminal self". They form together one of three classes into which we may divide the numerous conceptions which Myers' hypothesis claims to bring together in a profounder synthesis.

For the sake of clearness and brevity let me examine this first class at once before going on to the others, merely premising that I reserve consideration of all the "supernormal phenomena" which I group together to form the third class. Of all these conceptions that of the secondary or subsidiary consciousness plays the largest part. In the chapters on "Disintegrations of Personality" and on "Hypnotism" Myers exhibits the evidence for the existence of such secondary consciousness, and while he agrees with M. Janet in regarding them as fragments snatched or lapsed from the supraliminal consciousness, he differs from him in this—that while Janet regards them as isolated fragments only, Myers regards them as having become fragmentary parts of a larger whole, the "subliminal self"; they are a multiplicity in unity. The conception is to my mind equally obscure with the Christian Trinity and Janet's conception is by comparison clear and simple. Yet if the "subliminal self" be otherwise justified one may perhaps waive this objection. Now the activity which underlies such secondary consciousnesses seems to surpass the powers of the ordinary self in two ways; in the first place it seems to be capable of exerting a greater influence upon the visceral or organic functions, especially upon secretion and nutrition. This fact, together with the unfounded assertion that sleep effects a degree of recuperation of bodily and mental powers greater than can be attributed to simple rest with predominance of the anabolic processes, is regarded by Myers as evidence that the soul can draw into the animal body through subliminal channels drafts of "metetherial energy," converting it presumably into stores of chemical energy, just as chlorophyl converts etherial energy into potential chemical energy in the bodies of green plants. Yet, as we have seen, it is the supraliminal channels which are especially "adapted to the maintenance and guidance of earth-life". And Myers' other suggestion, that in this psychical control of metabolism we see a "recovery of primitive plasticity," seems to be preferable, unless we find other and better evidence of the existence of the soul, of subliminal channels and of stores of "metetherial energy" upon which the soul can draw. In the second place, there is evidence that a secondary consciousness or self, when

well developed, may surpass the normal self in arithmetical power, in retentiveness, in histrionic capacity and in cunning. In discussing the secondary consciousness of hysterics Myers gives us one of his brilliant analogies which does more than any other passage of the book to illuminate the conception of the "subliminal self," but carries no more evidential weight than analogies are wont to do. The hysteric differs from the ordinary man in that his ordinary consciousness is narrowed and mutilated through the subtraction from it of those elements which have become split off to form a secondary consciousness or consciousnesses—then "much as the hysteric stands in comparison with us ordinary men, so perhaps do we ordinary men stand in comparison with a not impossible ideal of faculty and of self-control".

Of the other conceptions of the first of our three classes, I need touch on one only, that of the psychical activity which is assumed to bring our presentations "before the footlights of consciousness" (von Hartmann's "absolutely unconscious"). And the consideration of this leads us at once to the second class of evidence for the existence of the "subliminal Self". This consists in certain states of ordinary or supraliminal consciousness which are conceived of by Myers as having been generated in the first place by the workings of the soul in subliminal channels, and as having subsequently burst through the diaphragm that divides the two selves, to take their place in the stream of states of consciousness of the supraliminal self.

Among the states of supraliminal consciousness specified by Myers as being of this peculiar origin, we find the states of consciousness accompanying impulsive and instinctive action and bodily activity during moments of excitement, hallucinations, dream-images, the images of reverie, such memory-images as surge up into our minds with vividness, after-images, recurrent sensations, marginal sensations, and lastly the great conceptions of men of genius. When we seek the criterion, the distinguishing mark by which we are to recognise the members of this somewhat mixed society as being products of the soul's subliminal activity, and which gives them an indisputable claim to rank as such, it appears to be that they are all alike "projected ready-made into ordinary consciousness". But if we accept this criterion we shall have to extend still further Myers' list of subliminal products. Let us, in order to simplify the argument, admit, with the metaphysical psychologists, that in the case of states of consciousness accompanying voluntary effort, whether of thought or bodily movement, the self is aware of its own activity, that the dynamical factors enter to some extent at least into consciousness; there still remains a very large proportion of the ordinary states of consciousness of the ordinary man of which this cannot be made to appear true by any fiction, *e.g.*, the great mass of his sensations and sensory percepts and all images forming parts of simple trains of association; for the activities which determine the appearance of these contents of

consciousness are completely outside consciousness, whether we regard them as purely physiological activities or, with von Hartmann, as in part purely psychical activities obeying purely psychical laws. Of the phenomena of this class Myers is principally concerned with the conceptions of men of genius and with hallucinations. Now it is probably true that the ideas of men of genius flow more freely, *i.e.*, rise to consciousness with less of voluntary self-conscious effort, than the ideas of ordinary men, but that peculiarity they share with the more ordinary states of consciousness of Mrs. Jones the washerwoman, whose conversation reveals an undue preponderance of simple associative (but entirely unconscious) processes. Myers in fact laboured under the not uncommon misconception that the ordinary idea or percept of the ordinary man is constructed from discrete psychical elements by a series of voluntary efforts, much as one might construct a mosaic or paint a picture; and this unfortunate error, which Myers might perhaps have avoided if he had devoted a part of his energies to the study of "ordinary psychology," is the principal ground for the assumed connexion between the "subliminal self" and genius, sleep and "sensory automatisms".

These simple considerations seem to me to forbid us to regard the ideas of men of genius, hallucinations (such at least as are not veridical and therefore supernormal), after-images and all the rest of Myers' list of subliminally generated contents of ordinary consciousness as states of consciousness produced by a mental activity different in kind to that which produces our most commonplace states and demanding, for the explanation of their genesis, a conscious activity of the soul in special subliminal channels, followed by irruptions through the diaphragm which divides the ordinary from the "subliminal self". Before leaving this subject and passing on to the supernormal phenomena let us note that Myers chooses, as the clearest instance of this class of subliminal products, the right answers to difficult arithmetical problems found by "calculating boys" and that in the only instance in which we are furnished with any details of the mode of working of the problems, that namely of young Blyth, we have clear proof that steps of the calculation were present to the ordinary consciousness of the boy; for when his father worked out the same problem, the calculation of the number of seconds since the boy's birth and found a different number, the boy at once replied that the father had "left out two days for the leap-years—1820 and 1824".

Myers' general treatment of genius would only be justified if it could be shown that the works of genius, the writings, the sculptures, the paintings and so forth are commonly, or in any considerable number of cases, produced by automatic movements of the hand or organs of speech. But of this we have no evidence if we put aside *Kubla Khan* as produced under the influence of opium. Myers does not venture to apply the word automatic to the intellectual activities of men of genius, but he does class all hallucinations as "sensory automatisms," and in so doing seeks to compel the assent

of the unwary to his assumption of their subliminal character. It is therefore necessary to criticise Myers' classification of hallucinations (veridical or not) as "sensory automatisms". In the chapter on "sensory automatisms," automatisms are defined as "messages from the subliminal to the supraliminal self". Now the meaning of the term "motor automatism" is clear enough; it denotes such more or less intelligent activities as automatic writing and speech, of which the characteristic feature is that the ordinary self remains unaware of the movements, and of the ideas expressed by them, unless it sees the writing or hears the speech. How then does Myers manage to bring the motor automatisms under this definition (as he does on p. 88, vol. ii.)? For by so doing he makes it appear that hallucinations are due to the same class of process as motor automatisms, which are truly subliminal in the sense of being wholly outside ordinary consciousness. It is effected in a second definition of automatisms as "manifestations of submerged mental processes, which do not enter into ordinary consciousness" (vol. ii., p. 82). On making this discovery I was overcome, not for the first time, by a feeling of admiration for Myers' literary skill. But my duty as critic compels me to point out that this seemingly successful assimilation of motor and "sensory" automatisms consists in an illegitimate manipulation of terms, and depends upon the ambiguity of the relative pronoun in the sentence quoted. If the word 'which' relates to the noun, mental processes, then the definition includes not only motor automatisms and hallucinations, but all other contents of ordinary consciousness, for, as we have seen, all states of consciousness (with the possible exception of states resulting from voluntary effort) are manifestations or products of processes "which (the processes themselves) do not enter into ordinary consciousness". The definition, in this case, fails to mark off automatisms from other kinds of mental state or process. If, on the other hand, the 'which' relates to the noun, manifestations, then the definition ceases to be true of hallucinations and most of Myers' "sensory automatisms," for they are manifestations that do enter into ordinary consciousness. There is much virtue in a name, and Myers' exposition exhibits an extremely skilful application of that truth, nowhere more strikingly than in this instance, but perhaps equally so in his definition of suggestion in the opening of the chapter on hypnotism as "a successful appeal to the subliminal self"; and again in the pronouncement that telepathy is an impact of the "subliminal self" of one man upon another's, and in a hundred instances of his use of the word subliminal.

Let us turn now to the third class of evidence for the reality of the "subliminal self," namely, supernormal phenomena. Here if anywhere must lie the strength of the case, for we have seen that the phenomena of other kinds that seem to call for the hypothesis are so few and call with so uncertain voices, that we can only be justified in applying it to their explanation if we find other and far better grounds for its adoption.

In considering the bearing of these supernormal phenomena upon the hypothesis of the "subliminal self" it is necessary for the purpose of discussion to assume with Myers, without further question, that their occurrence is now proved. Let us take first experimental telepathy. In some cases, as in that of Mr. and Mrs. Newnham, the "supraliminal" idea of the agent seems to affect a secondary consciousness of the percipient who makes intelligent replies to his questions by automatic writing; in other cases, as in Mr. Guthrie's experiments (and these would seem to be among the most satisfactory), the "supraliminal" idea of the agent reproduces itself in the "supraliminal" consciousness of the percipient; in other cases again, as in that of Mr. H. S. B., the agent deliberately sets himself in full self-consciousness to make his image appear in the ordinary consciousness of a friend at a distance and apparently succeeds. But I cannot find any instance of the communication of an idea from a secondary consciousness of the agent to that of the percipient. Why then must we believe that telepathy is interaction between two "subliminal selves"; the evidence seems rather to point the other way, and to indicate that the agent's consciousness at least must be "supraliminal". But however that may be, the hypothesis immediately suggested by the facts, and the one that involves fewest elements of mystery, is that a state of one consciousness can by some direct, though entirely obscure, action at a distance induce a similar state in another consciousness; whereas the application of the "subliminal self" to the explanation of the cases in which both inducing and induced states are states of an ordinary consciousness involves the same assumption of action at a distance and two additional mysterious processes, the sinking of the inducing state of consciousness through the diaphragm into the "subliminal self" of the agent, and the uprising of the induced subliminal state into the supraliminal consciousness of the percipient. Myers' grounds for thus complicating the process seem to be given at the end of chapter vi., when, after describing such cases, he exclaims, "What can be a more *central* action—more manifestly the outcome of whatsoever is deepest and most unitary in man's whole being?" Then, since the "subliminal self" is *ex hypothesi* the deepest part of man's being, it follows that it must somehow be at work in such cases.

Phantasms appearing simultaneously to a number of independent witnesses and seen by all in the same spot seemed to Myers, rightly enough, to demand some other explanation than simple telepathy. Let us take as typical the case of Captain Towns. In this case, some weeks after a man's death, eight members of his household, relatives and servants, enter a room in his house in turn, and each one sees as he enters (nothing having been suggested to him) a half-length picture of the deceased householder mirrored as it were upon the polished surface of a wardrobe. The widow then makes a movement as though to touch this picture and "as she passed her hands over the panel of the wardrobe the figure

gradually faded away". For the explanation of such cases Myers constructs his theory of the "phantasmogenetic centre" as follows: The "subliminal self," that "most unitary" part of man's whole being, has the power to throw off a fragment of itself into some definite spot where this fragment produces some obscure modification of space (not, it would seem, a modification of matter, or of ether, but of space, pure and unadulterated). Persons in the immediate neighbourhood of this spot then may perceive this small part of *modified space* as an image of the person from whom the fragment of the "subliminal self" has been thrown off, and they perceive it, not through the eye or other sense-organ, for that would imply a modification of matter or of ether in the position occupied by the phantom, but through some hidden faculty adapted to such perception, through "a certain kind of immaterial and non-optical sensitivity," and the image enters their ordinary consciousness in a form indistinguishable by them from percepts achieved in the ordinary manner by eye and sensory nerves.

Here Myers' theory enters into competition with the ordinary theory of the Spiritualists, who assume that a disembodied spirit is capable of effecting a redisposition of matter or ether in the spot occupied by the phantom, such that the eye receives an optical image and the percept enters consciousness in the ordinary way. Now, in choosing between these two theories, we must remember that Myers himself believes that we have proof of independent existence of disembodied spirits and of their power to modify the state of matter. We have then on the one view only two difficult conceptions, the existence of the disembodied spirit and its power to modify matter, and both of these are admittedly proved by other independent phenomena. On the other view we have to assume, firstly, the "subliminal self"; secondly, its power to throw off an "excursive fragment of the personality"; thirdly, the power of that fragment to modify a particular portion of space (not matter or ether); fourthly, the power of the ordinary man to perceive the modification of space in that spot (when he turns his eyes towards it) as an image which closely simulates an ordinary optical image, this obscure faculty being one of whose existence we have no other indication. There can be no doubt which of the two theories we must prefer according to every rule of scientific reasoning. And the ordinary or spiritualistic theory appears especially preferable in those cases in which the phantom picture consists of several figures, both of men and animals with the ordinary accessories, such as garments and horse-trappings, and even contains an image of one of the percipients.

The only ground for bringing the "subliminal self" into the play is the presumption that the agency projecting the phantasmal picture of the body is the mind of the person whose body is pictured, and the fact that, in cases of phantasms of the living, the person whose phantom is seen remains as a rule unaware of the event. But the fact that the picture may contain several persons,

as well as animals and lifeless objects, proves that if any mind is the agency it is not always or necessarily the mind belonging to the body which appears in the picture, and the agent may therefore be any one or more of the countless spirits of the universe. And that the phantom may be perceived optically, and not by means of any obscure faculty postulated *ad hoc*, is indicated by a large group of cases of the type of the ordinary ghost of fiction (paragraphs 744, 745). In such cases we have careful descriptions of the fact that the figure seen prevents vision of objects behind it, and that the figure itself becomes invisible when other objects intervene, and in fact the perception would seem to obey so exactly the laws of optical perception that, if we assume with Myers non-optical perception, we shall have to exercise our inventive faculties still further to explain this simulation.

The other supernormal phenomena fall under the heads of telæsthesia, heteræsthesia, telekinesis and possession. In the case of the first three I cannot see that Myers has discovered any considerations that might lead us to ascribe them to the "subliminal self". Heteræsthesia Myers is inclined to regard as a case of telæsthesia or clairvoyance and the problem of clairvoyance, in so far as it is not explicable telepathically, he does not claim to explain, contenting himself with the suggestion that "All matter may, for aught we know, exist as an idea in some cosmic mind, with which mind each individual spirit may be in relation, as fully as with individual minds". With telekinesis Myers does not deal except to accept its reality in passing.

We come then to the culminating phenomenon of possession, the evidence of which constitutes the main strength of the evidence of survival of the personality after death. Now it was, as we have seen, in order to harmonise the evidence of survival with the general body of accepted scientific belief that the hypothesis of the "subliminal self" was excogitated. It is therefore with no little astonishment that the reader discovers in the chapter on possession that the "subliminal self" has nothing to do with the case. The evidence of possession consists in the messages written or spoken automatically by entranced "mediums," in answer for the most part to spoken questions and revealing the personality of deceased persons. And Myers' explanation of the phenomenon is simply the old old theory of possession of the body by the spirit of the dead. The spirit of the medium withdraws wholly or partially from his body or brain and the nervous mechanism is operated by one or more disembodied spirits.

I have reached the end of my review of the phenomena to the explanation of which the hypothesis of the "subliminal self" is applied and I do not think that any important group of the phenomena has been omitted from this review. I have for convenience of treatment divided the phenomena into three groups, (1) states and processes which are not present to ordinary consciousness; (2) states of ordinary or supraliminal consciousness

considered to be products of the soul's activity in subliminal channels; (3) the supernormal phenomena. We have seen that in the first group we have evidence of the occasional existence of a secondary consciousness (co-existing beside the primary or ordinary consciousness) which in some cases has become so highly developed as to constitute a secondary personality and which sometimes exhibits intelligence and sensory powers and powers over the metabolism of the body greater than those of the primary personality. But we have seen that, with the doubtful exception of the last, these phenomena of divided personality are well explained by Dr. Pierre Janet's clearly conceived theory of mental disaggregation, and neither call for, nor in any way directly support, the hypothesis of the "subliminal self". Of the phenomena of the second group, ideas of men of genius, hallucinations, etc., we have seen that they are regarded as being off-shoots of the "subliminal self" in virtue of an erroneous psychological assumption, the assumption namely that the mind is normally aware of the processes which determine the succession and the composition of its states of consciousness. Turning to the supernormal phenomena we found that in the case of thought-transference the ideas or sensations transferred are always, or usually, present to the ordinary consciousness of the agent and that the transferred state also appears frequently in the ordinary consciousness of the percipient. The invocation of the "subliminal self" for the explanation of these facts appeared therefore as a gratuitous complication of a sufficiently mysterious subject. We saw that the whole group of supernormal phantasms, in so far as they are not telepathically explicable, are best regarded as manifestations of the activity of disembodied spirits, and that here again the invocation of the "subliminal self" constitutes a gratuitous complication amounting in the case of the "phantasmogenetic centre" to monstrous proportions. Lastly we saw that Myers himself does not seek to find for the conception any support or any rôle in the culminating phenomenon of "possession".

But now let us put aside the conclusion here indicated, and accepting for the moment the "subliminal self" as a well-founded hypothesis, let us ask how far its establishment achieves the ends for which it was conceived. In the first place, we find that, as Dr. Leaf has well shown, the acceptance of the doctrine of the "subliminal self" deprives the evidence for the continuance of life of the spirit after the death of the body of all that emotional and ethical value which Myers himself and most of those who ardently desire it have attached to it. For that which survives, according to the showing of this hypothesis, is something vastly different from the personality that strove and hoped and was known and loved here in the flesh.

From another standpoint we may ask, Does the acceptance of this hypothesis harmonise the belief in a future life with the well-founded conclusions of modern science? It must be admitted that,

if it does so, it is in a hardly appreciable degree. We have seen that Myers held up, as the principal difficulty in the way of belief in the survival of personality, the opposition between the views of the Self as co-ordination and the Self as permanent unity. Let us grant (again for the purpose of discussion only), that the hypothesis does reconcile these two views. It will remain true that this opposition was only one, and that not the greatest, of many difficulties. The main difficulty is not in any way touched by the hypothesis. It is this: Our sensations are caused by changes in the brain-matter, and there are irresistibly strong reasons for believing that similar material changes, or transformations of physical energy in the brain, are essential conditions of all our states of consciousness; and there is equally good reason to believe that memory is conditioned, in part at least, by changes produced in the disposition of the matter, or in the state of the matter, of parts of the brain. How then can the procession of states of consciousness continue and the store of memory-images persist undisturbed when the matter of which the brain was composed has been scattered to the four winds of heaven? Myers admits these facts, yet he has not realised the difficulty presented by them for survival (as is proved by his statement that there is no great step from telepathy to possession, i., p. 250) and his hypothesis of the "subliminal self" does not attempt to deal with it.

These considerations forbid me to agree with the estimate of the conception of the "subliminal self" expressed by Prof. James and Sir Oliver Lodge, and I confess that if any man should tell me that this hypothesis is no great conception and effects no profounder synthesis but is an elaborate and gratuitous mystification, a monstrous confusion of things that are by nature disparate and distinct, the creation of a mind too passionately centred upon the establishment of one great thesis, I should be at a loss to answer him.

I have no space to touch upon a hundred difficulties over which Myers lightly strode. I have space only to say that, like Prof. Flournoy, I have enjoyed Myers' magnificent disdain for the problems of modern philosophy and the splendid independence that led him to proclaim the palæolithic thinkers as his sole forerunners; that I have been filled with admiration for the literary grace, the brilliant use of analogy, the subtlety of exposition, the lofty and eloquent speculation that adorn every chapter; for the true openness of mind, and the critical attitude well sustained in the face of the greater part of the masses of evidence, and lastly and mostly for the fine enthusiasm for man's future life upon this earth. That future generations will accord to Myers a place in the history of the intellectual development of mankind I have no doubt, but I do not think that they will remember the hypothesis of the "subliminal self" as a part of his achievement.

W. McDougall.

The Pathway to Reality. Being the Gifford Lectures delivered in the University of St. Andrews in the Session 1902-3. By the Right Hon. RICHARD BURDON HALDANE, M.P., LL.D., K.C. London: John Murray. 1903.

THOSE who are not in love with Prof. James's attempt to base religion upon a sensationalistic Metaphysic (or negation of Metaphysic) eked out by a study of abnormal psychical phenomena will turn with relief to the St. Andrews Gifford Lectures for 1902-3. In Mr. Haldane we have a writer who believes that a Religion which is really to retain its hold upon the thought of the world must be based upon Reason. Whatever view may be taken of his conclusions, there can be no question that he has given us a piece of solid and profound metaphysical thinking. Both from a metaphysical and a literary point of view, this is an extremely brilliant exposition of Hegelianism pure and simple—Hegelianism not of the right or of the left, but of the centre. For once this statement may be made without offence, for Mr. Haldane tells us that everything which is of value in his lectures comes from Hegel except what is due to the advance of science since Hegel's day. To this perhaps over-modest profession most readers will be disposed to make one further exception—that is to say, a lucidity both of thought and of expression which, it must be admitted, is as great as is compatible with the nature of his subject-matter and of his own philosophical position. And their admiration at the metaphysical ability and the metaphysical eloquence which the Lectures display will be increased when they learn that the book consists in a short-hand reproduction of *ex tempore* discourses. Any one who wants to know what the Hegelian position really is cannot do better than read these Lectures, though it may be doubted whether they will have much meaning for those who have not gone through a pretty systematic course of more elementary philosophical study. In saying that Mr. Haldane expressly disclaims any originality in his central position, I do not of course mean to suggest that there is no originality in his exposition and defence of it. Though seldom admitting that there is much force in the criticisms directed against the Master, Mr. Haldane takes account of these criticisms, and some of his readers will be disposed to think that he has really been more influenced by them than he is disposed to admit, and to suspect that we are presented rather with a reconstruction, or at least a somewhat eclectic development of Hegelian ideas than a purely historical reproduction of the Master's thought. It may be remarked by the way that Mr. Haldane makes much use of Aristotle whom he thinks that "Hegel first taught the world to read" (p. 169). Here it is still more doubtful whether we are not often presented with what the mediæval lawyers called a "glossa Aurelianensis quae destruit textum". Mr. Haldane would of course admit that much of Aristotle's actual system is dependent upon his mistaken or limited

conceptions of physical Science, but it may be doubted whether the separation between the physical and the metaphysical side of Aristotle can be carried out as completely as the Hegelian interpretation supposes.

The book consists of two parts. The first is a statement and defence of the idealistic position in its Hegelian form: the second, entitled the "Criticism of the Categories," consists in an attempt to re-state in the light of present Science the Hegelian view of the relation of the lower categories—the categories employed in Mathematics and Physics—to the higher categories postulated by Biology, Morality, Religion and Philosophy.

With regard to the first of these parts, it would be useless to attempt a *résumé* of what is itself—of necessity, owing to its limits—a *résumé*. Nor is this the place for any general criticism upon the Hegelian position. Against many of the current criticisms upon that position Mr. Haldane certainly justifies himself strongly enough, whatever may be thought of their validity against Hegel himself. His Universe is certainly no "unearthly ballet of bloodless categories". He certainly does not think it possible to anticipate experience, and deduce the Universe by *a priori* thinking. He differentiates himself from "subjective Idealism" to the farthest point which is still compatible with Idealism. He dislikes even the common phrase about the mind "making" Nature: it is equally true, he holds, to say that Nature makes the Mind. If he is less emphatic in his insistence upon immediate feeling than Mr. Bradley, it could hardly be said of him, as Mr. Hobhouse has said of Green, that it is not clear what function he attributes to sensation in the formation of our knowledge except that it is a contemptible one. If he is disposed to minimise the importance of the distinction between Will and Thought, he has been affected by the insistence of recent Psychology upon "attention," and is prepared to admit that the ultimate Reality must be looked upon as Will no less than Thought. In these and many other ways Mr. Haldane is emphatic in repudiating many of the ideas which have rightly or wrongly been attributed to Hegel, and which have certainly more or less coloured the teaching of not a few among his disciples. But in other ways Mr. Haldane seems to me to bring out in what I may call an aggressive form the difficulties which Hegelianism presents to those who, if they have explored its outer court, do not pretend to have found their way into its Holy of Holies, and are doubtful about the existence or the importance of the secrets alleged to have been discovered therein by those who profess to have penetrated beyond the veil. The great difficulty which they experience is to grasp the relation which is supposed to exist between the universal Mind and its individual manifestations. Dr. McTaggart, who professes to be herein a faithful interpreter of the Master's thought, has, indeed, got rid of the difficulty of minds within a Mind by frankly admitting that the universal Mind is only a name for the organised society of in-

dividual minds. This is at least intelligible, whatever may be thought, from a speculative or from a religious point of view, of the resulting *Welt-anschauung.* Prof. Royce again has attempted to clear up the relation between the individual self-consciousness and the universal in a way which, however mystical it may seem to those who tarry with Lotze in the outer court, cannot be accused either of suppressing and undervaluing individuality or of reducing the Absolute to a *mere* collection of individuals. I must respectfully submit that Mr. Haldane has simply cut the problem altogether. If he has done anything to clear up the mysterious haze in which that relation was left by Green, it is only by heaping more abundant scorn upon the individual. Nothing, indeed, can exceed the airy contempt with which he speaks of the individual mind.[1] It is merely by an abstraction—necessary, indeed, for purpose of social intercourse, but only possible from a low level of thought—that "the mind can be regarded as one thing among many". After pointing to the kind of difficulties which Mr. Bradley has urged against the absolute reality of the Self, he declares "It is very difficult really to come to any other conclusion than that the word 'self' is like the word 'cause,' one of those outcomes of half thought out standpoints which are useful in everyday life, but which will not bear the dry light of Science" (pp. 106-7). Without acquiescing in Mr. Bradley's view of the matter, I may point out that in Mr. Bradley the denial of absolute reality to the self is at least qualified by much more insistence upon the doctrine of "degrees" in reality than we find in the pages of Mr. Haldane. I doubt whether Mr. Bradley would ever allow himself to speak of the soul as "just an event or a series of events" (pp. 146-147), or would endorse the statement that "your Ego comes to disclose itself as a mere asymptotic regress towards a notional pure subject of knowledge—a thinker without thoughts, an abstraction, nothing at all" (p. 154), or speak of it as a *mere* phrase of the ultimate reality; nor would he go the length of saying "There is only a single experience, that which is ours. Other human beings have neither the same experience, nor a different experience" (p. 295); nor would he treat the language which recognises a difference between individual subjects (and presumably individual wills) as a mere "simile" (p. 295).

Of course every one who has read the *Critique of Pure Reason* will recognise the process by which the thinker gets himself into this position. The self considered merely phenomenally as a series of events in time is evidently just on a line with any other phenomena. And it is easy to show that the 'Ego' when abstracted from the series is not a 'thing' of which we can have knowledge. But Kant did not doubt that there was an individual

[1] It is true that Mr. Haldane talks about "the Individual" as the only Reality, but of course he means by this the One Reality of which all finite souls are but "aspects".

"noumenal" Ego operative in knowledge, although his arbitrary restriction of the term of knowledge to the bringing of a sensuous matter under the twelve 'categories of the understanding' prevented him from saying that we have a 'knowledge' of such a self—except, indeed, the practical knowledge implied in the consciousness of Duty. Mr. Haldane, with his ample recognition of the higher categories ignored by Kant, need have no scruple in recognising that the individual self is and may be known as something more than the series of presentations of the "inner sense," and yet as something less than the Universal subject. Such a continuous individual subject seems to be called for to explain the fact of individual knowledge and the no less actual fact of individual ignorance, though that subject is nothing when taken apart from the phenomenal series which it connects. It is a conception that is required for a reasonable Psychology, whatever may be said about the higher point of view which is to transcend it. Of course this "self" is an abstraction in the sense in which everything is an abstraction which is less than the whole, as all knowledge is an abstraction which is less than complete knowledge: and from that obvious fact it is possible to go on to infer (rightly or wrongly) that from the highest point of view—the point of view of speculative Philosophy—the individual is a part of or even a "phase" of an Absolute Mind. But, waiving the question of the possibility of applying the idea of part and whole to the relation between minds or "centres of consciousness," it is at least incumbent upon a philosopher who takes this view to show that he can recognise enough individuality in the self for the purposes of ordinary life—to say nothing of morality and Religion. In morality at all events it is with the individual self that we have to do. If this self is to be no more than the phenomenal self, the series of events which the Ego presents to itself, there seems to be no room for any morality but the morality of Hume. It is no use to say that the series is held together by the universal Self-consciousness: we do not (in morality at least) attribute our bad acts to the universal self-consciousness. If the only other self, the only connecting link between the successive moments of individual experience, that we can recognise is the Universal Self, this self surely cannot be the self which is implied in morality. Even Mr. Haldane admits that social intercourse implies the existence, or at least appearance, of individual selves. Now it is the boast of the Hegelian Philosophy, as interpreted by Mr. Haldane, that it "restores to plain people their faith in the reality of each of these phases of the world as it seems (p. 119)," that it is to enable us to "believe in the different aspects of the world as it seems—life, for example, as much as mechanism; morality as much as life; religion as much as morality". This is just the boast, I venture to contend, which Mr. Haldane has not made good. He has hardly attempted to make it good. In his pages the distinction between myself and my neighbours is not merely "transcended": it is ab-

solutely ignored and annihilated. The drift of his line of thinking, if it were logically followed out, would be to make morality a mere appearance or something less than that. It is possible to contend with Mr. Bradley and Mr. Taylor that moral distinctions (though they are from an ultimate metaphysical point of view mere appearance) should still retain for the man the validity which they have lost for the philosopher. But this is not the orthodox Hegelianism of which Mr. Haldane professes to be the prophet—the Hegelianism that is to justify the common moral and religious beliefs of mankind. And neither Mr. Bradley nor Mr. Taylor has gone nearly the lengths of Mr. Haldane in extinguishing the reality of the individual, and consequently the at least relative validity of that ethical point of view which presupposes his reality.

Mr. Bradley once wrote a powerful article on the "alleged uselessness of the soul". I would respectfully commend it to Mr. Haldane's consideration. He has of course no sympathy with the crude materialism against the implications of which that article is directed; but I venture to suggest that he virtually comes round by another route to the very same view of the Universe against which his own book is intended as a protest. If the point of view from which the Universe is regarded as made up of individual souls is not the ultimate point of view, it is the point of view which interests us as men. And after all, even if we admitted the point of view from which individuals are only "differentiations" of the Absolute, is there any real meaning or purpose in talking about the Unity as 'real' and the differentiations as mere "appearance"? The differentiation is as much a fact, and a far more important fact, than the Unity. If space would allow, I should like to transcribe some few pages of Dr. McTaggart's *Studies in the Hegelian Cosmology*, but I must forbear. I observe by the way that Mr. Haldane has nowhere alluded to the most powerful criticism which his position has recently received from within the Hegelian camp at the hands of Dr. McTaggart. Mr. Haldane like other Hegelians (though he is exceptionally courteous) exhorts "our would-be philosophers" to the study of Hegel, and is evidently disposed to attribute all dissent from his dogmas to neglect of that study or incapacity for profiting by it. Dr. McTaggart is a critic against whom neither disqualification can well be alleged. I hope he will some day do battle with him.

It might be supposed that if Mr. Haldane is inclined to make little of the individual consciousness, he would be proportionately clear about the self-consciousness of the Absolute, or (since, perhaps happily, the term "Absolute" is seldom or never used) the "Ultimate Reality". It is, indeed, pretty clear that he does think of the Ultimate Reality or God as a consciousness which is or includes more than the consciousness or experience of what (however "abstractly") we are compelled to talk about as individual persons. He is even prepared to attribute to him Personality (p. 131). But at other times we meet with passages which leave it doubtful

whether this supreme self-consciousness has any existence except in its finite manifestations. And, in so far as this view is suggested, there arises the old difficulty how Nature which is denied any existence apart from mind can be said to exist when and in so far as it does not fall within the experience of any individual soul. I do not, however, actually attribute to Mr. Haldane such pseudo-Idealism as this. But I could wish he would have been a little clearer on the subject, particularly in a course of Lectures which is designed to help towards a philosophical view of Religion. The Theologians on the whole get off very easily in Mr. Haldane's pages, but it is a pity that philosophers should not do a little more to help those much-abused persons to a more philosophical creed than that which they are accused of holding, especially when the philosopher is one who (like Mr. Haldane) professes not to be out of sympathy (in their ultimate meaning) with common religious beliefs.

There is one point on which Mr. Haldane cannot be accused of indefiniteness in dealing with the relation between God and the world. He tells us emphatically, though without much argument, that He is not at its Cause. I will not attempt to argue the question further, but will only say that it is unfair to men like Lotze and Prof. James Ward and Dr. Stout to assume that this position can be disposed of by the contemptuous denial that God is a "physical cause". That God is not a cause in the sense in which one phenomenal event or 'sum of conditions' is the cause of another event is just what they assert: only they deny that this mechanical conception of causality is the true and ultimate idea of it. Nothing can be more welcome to those who hold this view than Mr. Haldane's demonstration of the fact that Biology goes beyond the Category of Causality as it is understood in Physics, though it would seem more natural to say that in Biology we have to do with a kind of Causality which cannot be represented as a mechanical "uniformity of succession" than to say bluntly that "the act of determination and conservation amid the change of substance is not one in which we can perceive any relation like that of cause and effect" (p. 238). Still more startling is the attempt to show that in Biology time-distinctions are altogether transcended (p. 282). And it is not only with philosophers who may be said to represent the interests of Theism that Mr. Haldane brings himself into collision by his repudiation of the idea of Causality as applied to God. That the ultimate Reality as a whole (however understood) is the cause of its changing appearances or of the particular events within it, is asserted as strongly by those who speak of the ultimate Reality as an "it" or by those who think of that Reality as God. If the *word* "cause" is not to be used, some other is wanted. If the notion which men like Lotze express by saying that "Nature is the name for an event whose cause is God" is to be discarded, what real meaning is left in Mr. Haldane's admission that the ultimate Reality must be thought of as "Will" no less than

"Thought," however strongly it be insisted that these are but names for different "aspects" of one Being? After all, "aspects" are something, especially from the point of view of a Philosophy in which all differences are resolved into "aspects". Take away "aspects," and you have nothing left but the night in which all cows are black—a view of the Universe of which, in spite of all his disclaimers, Mr. Haldane by his constant talk of *mere* aspects, *mere* phases, *mere* stages and the like is constantly reminding us. After all, if you took away all the phases, what would be left of Reality? That the part is not the whole was known before Hegel, or even before Plato. It was really suspected, in all probability, even "on the banks of the Jordan" (*cf.* p. 123). Doubtless there is a difference between "phases" or 'aspects' and 'parts,' but the distinction should not be used to explain away all real difference in things.

The most permanently valuable and original part of Mr. Haldane's book seems to me to be the latter part, dealing with "The Criticism of the Categories". Here his wide scientific knowledge—rare in a philosopher, perfectly amazing in a philosopher who is also a K.C. in enormous practice and a leading politician—enables him to perform a much-needed task in presenting the doctrine of an ascending scale of categories in a form adapted to the present state of scientific knowledge. I would particularly call attention to his very careful and sober treatment of final causality in plants and lower animal life: "When we say that life consists of purposive action and development, we do not mean that there is a conscious and purposive application, *ab extra*, of mechanical force by some independent agency. Such a conclusion would only signify the re-introduction, under another form, of the old mechanical theory. We mean rather to record that we have observed phenomena which present no analogy to the mechanical or chemical action on each other of independent atoms, and which do present a certain but very limited resemblance to the action of a number of intelligent individuals working together to fulfil a common end" (pp. 243-244). From a *merely* biological point of view there is much to be said for not raising any further question as to the nature of this "quasi-purposive action": but can we ignore such questions from the point of view of Metaphysic? The individual plant surely cannot be allowed *more* independence than Mr. Haldane will concede even to the individual human soul. It must be admitted that in the plant—no less than in mere "matter and motion"—the ultimate Reality is acting. Now to such a thinker as von Hartmann the ultimate Reality is "unconscious mind": from his point of view it is reasonable to speak of the plant's pursuit of an end as the work of unconscious mind—the one single unconscious mind which is the source of all reality. But Mr. Haldane's ultimate Reality is not unconscious but self-conscious. Why then should he hesitate to say that the action is purposeful? Mr. Haldane will no doubt suspect the intro-

duction of the Hegelian's bugbear, the Theologian's "outside designer": but the outsideness is put there by Mr. Haldane, not by the unfortunate Theologian. Are not "inside" and "outside" in such a connexion wholly misleading spatial metaphors? Whatever may be thought of the legitimacy of "inferring" design from the behaviour of plants and animals, there ought to be no hesitation in recognising such behaviour as purposeful, when once we have got from general metaphysical considerations the right to think of the ultimate Reality as "self-consciousness". Or are we to deny to the ultimate Reality the highest kind of mental activity which we allow to its "phase," the so-called individual self?

Mr. Haldane's treatment of the categories employed in life and in consciousness and in purposeful human action is as thorough as his space permits. And yet I cannot but feel that in some ways the problem is a more difficult one (if it is not an impertinence to say so)—or, let me say, one less easy of solution by the simple formula about different "aspects of reality"—than Mr. Haldane conceives. I feel a doubt whether Mr. Haldane does not imagine that the 'pathway to reality,' when duly entered upon under Hegelian auspices, is a shorter cut than it is. The recognition that Biology involves categories which are absent in Physics, and human action categories which the merely biological view does not require, cannot prevent the raising of many important and difficult questions as to the conflict between these points of view. It is true no doubt that plants, animals, and men act in a way which cannot be explained from the merely mechanical point of view without interfering with the conservation of energy, that the human body is a machine which obeys all mechanical laws, but which acts very differently from a *mere* machine. But it is doubtful surely whether this principle—the introduction of fresh categories without mutual interference—is applicable all through. Each Science deals with some abstract "aspect of reality," but that very fact makes the conclusions of one Science liable not merely to onesidedness but to error. The Metaphysician must not merely pronounce each Science right in its own way; he must co-ordinate them where they come into collision or seem to do so. And therefore he cannot help asking himself the question: "Does not human action in a sense violate other mechanical laws, though it does not violate the conservation of energy, *i.e.*, does there not come a point where the physicist, applying his physical laws, would necessarily make a prediction which is not justified by the event?" Would he not necessarily predict that, given all the conditions of which Physics can take cognisance, a certain man will remain seated; while as a matter of fact he gets up and walks? Must we not admit (as Prof. Ward has urged) that "somewhere within the living organism physical events will happen that have other than physical conditions" (*Naturalism and Agnosticism*, i., p. 73)? This may be admitted

without so much as raising the question of Free-will, though it may also be doubted whether the acceptance of the Hegelian point of view shows that the problem of Freedom can be curtly brushed aside as meaning simply nothing at all. However fully Determinism may be admitted, there are many and difficult problems about the relation of the individual mind (or what appears to be such) to the Universal Mind, and these questions have important bearings upon Morality and upon Religion. Even Indeterminism can hardly be brushed aside as a mere chimera in the form in which it is defended by such men as Lotze, Renouvier, Prof. Howison and others. And Determinism may mean a great many different things. Spinoza, Mr. Bradley and Dr. Caird are all Determinists, but each of them denies much which one or more of the others would think it important to affirm. Another great omission in Mr. Haldane's work is the absence of any discussion of Time. The subjectivity of Time is simply assumed without argument, and assumed in a particularly extreme form. For these omissions the narrow limits which the author has prescribed to himself may no doubt be pleaded. But the curt way in which some of these great questions are touched upon is probably also due not only to limitations imposed upon the present volume, but to the assumption that the Hegelian clue carries us farther than it really does. Recent developments within the Hegelian school seem to show that even Hegelians not less appreciative of the Master's work than Mr. Haldane have begun to recognise that, however important Hegel's contribution to their solution may have been, his way of thinking is not exactly a magic key which unlocks all riddles; and that there are questions which, though orthodox Hegelianism may magisterially rule them out as meaningless, will continue to be asked, and will have to be answered. Among these are some of the ethical and religious questions upon which the Gifford Lectures of 1902-3 have hardly touched. I trust that in future Gifford Lectures or otherwise Mr. Haldane may find time to deal with them more adequately. At present many readers will be set wondering what possible bearing the belief in an Ultimate Reality such as our author has told us of can be supposed to have upon Religion or upon life. As to the metaphysical questions with which Mr. Haldane has really dealt, those who are least disposed to think that Hegel has said the last word about them, or that the last word has been said about Hegel, will feel sincere gratitude to Mr. Haldane for the clear exposition of much which has been often wrapped up in unnecessary mystery, and an ardent desire for more of the same quality.

H. Rashdall.

Geist und Körper, Seele und Leib. Von Ludwig Busse. Leipzig, 1903. Pp. x, 488.

The main object of this book is a thorough-going criticism of the doctrine of psycho-physical parallelism, but this is preceded by a refutation of materialism on other than purely epistemological grounds, and followed by an indication of the view of the world accepted by the author along with the counter doctrine of interaction. Prof. Busse discovers in his opponents a disingenuous tendency to take refuge in idealistic monism, whenever their theory lands them in a difficulty, which forgets that, in the light of the highest metaphysical reflexion, parallelism and interaction are alike in a certain sense fictions. The only question to be decided is, which gives the best explanation of empirical reality. Parallelism, leaving unchallenged opinions with which scientific investigation thinks it cannot part, gives an answer more congenial to science than interaction, which finds it difficult—Prof. Busse finds it impossible—to accept the principle of the conservation of energy. But, after all, philosophy is not the handmaid of science bound to homologate all its pet ideas, and, while the physiologist as such would gain nothing by the recognition of psychical processes that do not admit of mechanical construction, the philosopher as such would gain nothing by the resolution of the whole world into a mechanism of atoms. He would be quite incapable of comprehending the *meaning* of their endless combinations, even if every one of them were exactly calculable. Interaction does really help us to some comprehension of the relation between body and soul, and it does not necessarily imply the destruction of all science. Only in some, not strictly determined, still in a sense defined points, science would require to admit psychical events as causes or effects. It is not a necessity of thought that every physical event should be physically explicable, it is not an incontestable induction from the facts of experience, it is a mere hypothesis, which, so long as the actions of a man have not got their mechanical explanation, is illegitimately assumed to be universally valid. And pretty much the same is true of the principle of the conservation of energy. In agreement with Wundt, Prof. Busse distinguishes two moments in this principle, that of equivalence and that of constancy, and he sees no objection to regarding the principle of equivalence as a law resting upon experience, quite justifiably universalised and perfectly reconcilable with interaction; but, of course, if there is an exchange of activities between physical and psychical factors, the sum of energy in the physical world cannot remain constantly the same. That it does so, although raised to be the most universal principle of the investigation of nature, is a valid hypothesis only under the undemonstrable assumption that nature is one closed system. Such propositions are not regulated by the world, but by the thinking of a number of physicists, whose convenient assumptions philosophers are foolish

and servile enough to try to turn into absolute metaphysical truths. Yet it is these special hypothetical interpretations and additions to the concept through which we seek to render constant and regular relations of dependence intelligible to ourselves, that are supposed to set aside psycho-physical dependence as non-causal. Science may be contented with a causal concept reduced to mere regular succession, sufficient to describe and reckon the processes of nature, but philosophy cannot deplete it of the concept of action, force, active being.

It has been said, in answer to criticisms similar to those of Prof. Busse, that quantitative methods are only applicable on the assumption of the conservation of energy. It is, in Kant's sense of the term, an *a priori* proposition, and only implies that the universe is one coherent system, in which we need not fear, for certain purposes, to regard the organic as a higher form of the mechanical, or oppose the ideal of scientific explanation, found in a complete description of the universe in its simplest and most abstract terms. To some minds this is a completely satisfactory answer, to others the translation of teleology into mechanism conveys no intelligible meaning. It appears to confuse "why" with "how," by assuming that everything spiritual has a physical aspect, to which the methods of science can be applied, and identifying this with the immediate content of the Absolute, to which "why" would be improperly addressed. But, if the Absolute can have no possible estrangement from his immediacy, the finite spirit is barely resigned to its own: it cannot find itself again in the mechanism of nature. Prof. Busse does not state his objection in this way, but he questions both the assumptions on which, as it appears to me, the view he opposes rests.

He cannot recognise as self-evident the assumption made by Paulsen and Heymans that everything psychical must also present itself in the *mundus sensibilis* as physical. This is so if parallelism is valid, not otherwise. As it evidently depends upon the nature of things *how* they are perceived by us, so it may depend upon their nature whether they appear in sensuous form at all or not. Prof. Busse holds that we can hardly escape the conclusion that there are reals evident to sense and reals only cognisable in a non-sensuous manner. If we are under the compulsion of the forms of sensuous apperception, why do we perceive ourselves not only so, but also in a non-sensuous manner? And if we possess, along with the faculty of sensuous knowledge, also the faculty of non-sensuous knowledge, why can we perceive only ourselves in this way, and not other things as well? Is it impossible that the universal spirit should have posited in itself a stratum of eternally unchangeable, primitive, spiritual realities, appearing to our sensuous perception as nature, a world of corporeal things, extended and moving in space? The consequence would be that, not the Absolute itself, but only its partial content, appears to us in sensuous form; whilst of itself, active in all its works, but not

exhausted in them, it is true at the end, as at the beginning, that it is not perceived by the senses, but only in spirit and in truth. And is it an absolutely impossible assumption that the same spirit should have created in itself a realm of higher entities, capable of a greater or less development, and sharing with itself the property of being only spiritually cognisable? The spiritual monads would stand to the realm of thing-monads in relations of graded and changeable inwardness, appearing to sensuous perception as interaction. Naturally, if we accept such a standpoint, the physical universe cannot be regarded as a system fully complete in itself and inaccessible to any external influence. The process of nature would only be a part of the process of the universe; the whole of psycho-physical reality alone would show the unbroken self-sufficiency improperly demanded of nature, as a part of the whole.

The universal psycho-physical parallelism represented by Paulsen and Fechner, Prof. Busse considers the only application of the principle ultimately possible. Its employment as a mere working hypothesis always breaks down, owing to its negative assumptions. Wundt and Münsterberg are examples of the inevitable advance from its employment as a regulative, to its enforcal as a constitutive principle dogmatically claiming acceptance as the true doctrine of the relation between body and soul. Prof. Busse discusses, everywhere with acuteness, the three legitimate forms of parallelism—dualism, realistic and idealistic monism. I shall confine myself here to some points in his investigation of whether, and how far, parallelism is reconcilable with an idealistic basis. Idealism, he allows, certainly admits of a parallelism between one series of psychical processes, such as the series of presentations the content of which constitutes physical phenomena, and another series of psychical phenomena whether in the same or in different individuals, so that certain members of the one should correspond to certain members of the other, whilst a relation of cause and effect only took place between members of the same series. As psychical content, the affinity of these two series may be admitted, but there is no meaning in calling them identical, two sides of one and the same thing. They are two entirely separated series of psychical processes. The author will not admit that the identity of a presentation and its content has anything to do with the identity of the two series, which are as much distinct as the thought which one person has and expresses from the thought which he occasions in another. On purely idealistic grounds there is identity without duality, but, if the presentation content is hypostasised to produce the physical series, there is duality without identity. Moreover, along with the identity of the two series, the idealist must give up their parallelism, since the perceptions whose content forms the physical process are the temporally later effects of the intelligible process to which they ought to run parallel. The author considers this a point at once very difficult to follow and very important to understand. Take the case of a subject S who

observes himself while he thinks. The consequent perception of the cerebral process arises as a reaction of S upon the impression which he receives from his own states; it is therefore not simultaneous with the states occasioning it, but follows upon them. That is, considered as a presentation, the cerebral process, the so-called outer side of the psychical thought-process is not parallel to the same, but its subsequent effect. This is clearer if we substitute for the one self-observing subject two subjects S and S_1. On the emergence of a thought *a* in S, there is not simultaneously this thought as the perception of a cerebral process *b* in S_1, but this makes its first appearance as a consequence of an impression which S_1 receives from S. The physical construction of the matter would be, that the cerebral process which corresponds physically to the thought *a* impresses the eyes and nerves of S_1 and occasions a physiological process in his brain, which is to be regarded as the physical counterpart of the perception *b*. Thus, to the causal relation and temporal sequence between the two processes, there must, on parallelistic premisses, correspond a causal relationship and temporal sequence between the psychical processes *a* and *b*. We have really two causations, one connecting the members of the intelligible series, which we may call longitudinal or serial causation, and another which connects the individual members of this series with the corresponding members of the series of perceptions, which we may call transversal causation. Between the perceptions of the physical series themselves, there is no more causation than between the dots and dashes of the tape-machine. We have a parallelism which is not based on the independence of the two series, but makes the one series dependent on the other, and thus sequent in time.

The unavoidable demand of parallelism that the physical should represent a total spiritual reality is incapable of fulfilment. The consciousness that a given psychical content was exactly equivalent to a given cerebral process forms an irreducible psychical residue, which would reappear each time it had found its physical equivalent. Moreover, on the physical side, there is everywhere lacking the very thing which is to be added to the separate physiological processes corresponding to the psychical processes, in order that a unified physiological process should present the physical analogue to the unified psychical process. The only way out of the difficulty is for parallelism to contest the correctness of the conception of psychical unity, and to construct the psychical life in such a way that it may be entirely reproduced in the accompanying physical process. All psychical assumptions that cannot approve themselves as correlates of definite physical facts have to be dismissed. Thus, if the body is a plurality which can be analysed into its component parts, this constitution of the outer points to an analogous composition of the inner side. But a pluralistic or subjectless psychology is incapable of doing justice to the facts of consciousness. If the soul is a *Vielheit seelischer Erlebnisse*,

then the way in which it becomes a unity is not merely, as Paulsen admits, *nicht weiter angebbar*, it is unthinkable. Moreover, either logical law is present on the psychical side without any physical counterpart, when parallelism goes to bits, or it is resolved into a psychical mechanism. Prof. Busse does not seek to deny a psychical mechanism altogether, only to limit its extent. It is a product of the spontaneous activity of the soul, a practical convenience, alongside of which there persists a spontaneity, a creative synthetic power, without the admission of which you are driven to a materialistic conception of history, and must regard all that man has thought, or created, or elaborated as the necessary product of a blind mechanism. For mechanism does not become logical although in the long run conditioned by a logical point of view. Even if at the apex of the whole evolution, following its course according to mechanical laws, we placed the logical Idea, we would require, since everything spiritual must have its analogue in the physical world, to discover the physical parallel of the logical Idea, and this would then be a process following its course according to mechanical laws, like any other physical process.

The element of rather fanciful construction inseparable from monadological spiritualism does not seriously affect the critical part of Prof. Busse's work, which enters a fairly effective protest against a facile acquiescence in the dogmatic assertion of psychophysical parallelism. His book is interesting as a review of the present state of discussion on this subject and is not ill written, although it suffers from rather unnecessary iteration. It is surprising that, despite his evident acquaintance with English writers, the author does not quote Prof. Ward once, and thus seems unaware of how many points of contact he has with that writer's Gifford Lectures.

David Morrison.

Outlines of Metaphysics. By John S. Mackenzie, M.A. Glasgow, Litt.D. Cantab., Professor of Logic and Philosophy in the University College of South Wales and Monmouthshire. London: Macmillan and Co. Pp. xv, 172.

This book, says Prof. Mackenzie in the Preface, aims "chiefly at indicating the place and nature of the various metaphysical problems, rather than at threshing them out in detail". It shows the points at which difficulties lie, and gives "slight suggestions" of methods by which they may be dealt with. It is intended to be "chiefly serviceable to the student who is just beginning seriously to face the great issues that are included under the term Metaphysics". Most teachers of Philosophy have felt the want of such a book. The Histories of Philosophy, as Prof. Mackenzie says, do not supply what is wanted; and the Introduc-

tions to Philosophy—which are usually of foreign extraction—do not seem to meet the needs of ordinary English readers. The present volume will, we feel sure, receive a warm welcome both from teachers and students. The writer well remembers a period in his own studies when this book would have been a very great help, and when the want of such a book was a serious hindrance. Prof. Mackenzie has carried through an extremely difficult task with care and skill; for a good general survey of the problems of Metaphysics,—showing the student the significance of the various questions and their mutual relations, and suggesting methods of solution without laying down a complete metaphysical theory,—is an extremely difficult task to accomplish: but it is just what the beginner needs to have done for him.

We may give a brief indication of the course of treatment which Prof. Mackenzie adopts. Metaphysics deals with Experience as a whole, as a systematic unity, and inquires into its Meaning. Special sciences deal with particular aspects of Experience. "The term Experience suggests at once our point of departure—the consciousness of some individual mind—and so provides us with something of the nature of a guiding principle" (p. 13). But Experience has very different levels and very different degrees of significance for us. My experience is emphatically *mine*, but I am aware that there is presented to *me* a world somehow independent of my individual apprehension of it. Hence the most fundamental aspect of Experience is the *duality* of Subject and Object. The author shows skilfully how this duality becomes transformed into a *dualism* of Mind and Matter, and how this gives rise to the Metaphysical theories of Dualism, Monism (so-called), Materialism, Agnosticism, Idealism (chap. iii.); and again how reflexion on the difficulties of these theories leads to the Transcendental and Critical attitudes. "Transcendentalism comes to mean that the whole system of reality—and not merely the world as we know it—is constituted by thought-determinations. This phrase, however,—'constituted by thought-determinations,'—is a somewhat vague one, and is capable of very various interpretations. . . . To interpret it satisfactorily, we must understand precisely what is meant by a thought-determination; and this throws us back upon the consideration of the general nature of thought, and in fact upon all those problems, the discussion of which is generally included under the term Epistemology. . . . In the meantime our attitude towards metaphysical theories must, at any rate in some sense of the word, be a *critical* one. We see that they all present serious difficulties, and force us back upon previous questions" (pp. 34, 35). The critical attitude consists essentially of an inquiry into *methods*.

After reviewing the early Dialectical, the Dogmatic, the Psychological, the Critical (Kantian) and the later Dialectical (Hegelian) methods, the author arrives at the following statement: "Given an objective experience [in other words, starting from the Duality

of experience, behind which we cannot go], what account can we render of the significance of the various elements in its growth? We are to study the process of experience, not as a process, not from the point of view of its origin and course, but rather from the point of view of what it becomes, from the point of view of what it has in it to be. We are trying to discover, in the significant Aristotelian phrase, its *τὸ τί ἦν εἶναι*, what it essentially was" (pp. 45, 46). This amounts to what has been called an immanent criticism—a criticism of the different aspects of subjective-objective experience by each other.

A careful genetic survey of Sensational, Perceptual, and Conceptual experience (book ii., chaps. i. to iv.) brings out the metaphysical problems involved in each: *viz.*, Kind, Quality, and Degree (in Sensation); relations of Time and Space; the "more purely conceptual" relations of Number, Cause and Effect, Substance and Accident, etc.; relations of Value and End. The problem of Metaphysics is to understand these various modes of determination, and to see within what limits each is valid. They are forms of a *Constructive Activity*, and give rise to certain main types of construction — Perceptual, Scientific, Ethical, Æsthetic, Religious, Speculative. Book iii. is occupied with discussion of the character and limits of each of these main types. Each is justified within its limits. Religion is explained as an effort to view the universe as a complete system which is one, beautiful, and good; Speculative Construction, as a systematic attempt to think out the justification for such a view of the Universe. So stated, there is little to object to in the distinction. But the chapter on Religion (pp. 138-145) seems to the present writer to be the one really unsatisfactory chapter in the book. To discuss it fully would carry us far afield. Prof. Mackenzie speaks of Religion when he means *religions*. Religions there are and have been; there is (or let us hope there may be) Religion. What may be said of the former is not necessarily true of the latter. The author speaks of an attitude of mind which is above them all—religions, poetry, metaphysics—as they exist apart. To our mind that *is* Religion. But he also speaks as if Metaphysics in some way completed Religion at a higher level; this suggests what Green called the one essential aberration of the Hegelian system. Yet he points out that the difficulties which make the limitations of "Religion" appear over again in the same forms in Metaphysics (pp. 143, 155). Also, on page 143, it is said that "it is difficult to convince men that good cannot exist at all except as a negation of evil," and, on page 154, that good "is only intelligible by contrast" with evil. If religion were merely a set of inadequate theories, doubtless it would differ from Metaphysics only as the uncritical differs from the critical method of dealing with the same problems; but this does not appear to be Prof. Mackenzie's view. For him, Religion has an element of Feeling and of intuitive Insight. But he does not say what happens to these when we pass from religious to speculative construction,

although on their *objective* side "the contents of the religious and the speculative construction would appear to coincide" (p. 158).

None the less this little book, with its careful survey of the ground and its eminently reasonable account of the nature and limits of speculative construction and justification of the worth of the latter (chaps. vi., vii.), will be of real value to students and teachers of the subject.

S. H. MELLONE.

VII.—NEW BOOKS.

Dissertations on Leading Philosophical Topics. By ALEXANDER BAIN, LL.D., Emeritus Professor of Logic, University of Aberdeen. (*Mainly Reprints from* MIND.) London, New York and Bombay: Longmans, Green & Co., 1903. Pp. vi, 277. Price 7s. 6d. net.

IT is hardly necessary to commend this volume to the readers of MIND, as the larger part of it consists of reprints from that journal, with which, doubtless, they are already very familiar. The papers on "Association Controversies," "Some Points in Ethics," "The Empiricist Position," "Pleasure and Pain," "Physiological Expression in Psychology," "Definition and Problems of Consciousness" are known to every psychologist; and few would think of writing on the malevolence of human nature without turning to the controversy between Dr. Bain and Mr. Bradley on that subject. Not the whole of Dr. Bain's contributions to MIND, however, are here reproduced, and we should have been glad to see several omitted articles included. We miss in particular the discussion with Dr. W. G. Ward on the Freedom of the Will—which is one of the most luminous discussions on that topic anywhere to be found. But the writer's main design has been to bring together the papers that deal specifically with controverted points in his own system, or that help to supplement or to expand what has been treated by him elsewhere. "I have reproduced in full," he tells us in the prefatory note, "and with almost no change, the principal articles to which reference was made in the Preface to the Fourth Edition of *The Emotions and the Will.* They contain, with some little difference in statement, my latest views on such of those debated issues as were not adequately expounded or not given in final shape in either of my two volumes on Psychology. . . . They are avowedly my sole amends for inability to execute that thorough revision of *The Emotions and the Will* which, although at one time resolved upon, had to be abandoned for the reasons given in the Preface to the Fourth Edition." In this way, the volume has a special interest and value, and will be widely welcomed—not least by the student of philosophy, who will find the treatment of the leading philosophical problems here exceedingly helpful and in convenient form.

But, while the greater part of the volume consists of reprints from MIND, there are three papers that have not appeared there, *viz.*, one on "The Respective Spheres and Mutual Helps of Introspection and Psychophysical Experiment in Psychology," originally read to the International Congress of Experimental Psychology held in London in August, 1892; one on "The Scope of Anthropology, and its Relation to the Science of Mind," read to the Anthropological Section of the British Association, at the Aberdeen meeting, in 1885; and one on "The Pressure of Examinations," being Criticism of a Protest issued by Mr. Auberon Herbert, in

1888, against the sacrifice of education to examination in our present educational system.

The first of these three papers is a defence of the position that, helpful though experiment and all the objective methods are towards the understanding and elucidation of mind, the leading psychological method is and ever must be Introspective. While quite welcoming the efforts of the psycho-physicist, it has a keen appreciation of their limits and is concerned with pointing out the hopeful regions of research and with indicating the precautions necessary for success. The same subject is so far pursued in the next paper, which has for its specific object, however, determination of the province of Anthropology, and should be taken in conjunction with a previous article on the "Definition and Demarcation of the Subject-sciences," so as to obtain a complete view of the author's handling of this important topic. In the last of the papers, Dr. Bain gives his views on the ever-present question of the pressure of examinations. His position is marked by great moderation. Fully alive to the abuses of the examination system, he is by no means prepared to pass unmitigated condemnation. On the contrary, speaking out of his own experience both as student at the University of Aberdeen in earlier days and as professor later on, he throws the weight of his authority in favour of examinations, maintaining that "the evils complained of are not universal, nor are they inherent in the system". The psychology of the matter is laid down in the concluding paragraph: "It has not escaped observation, since this question was mooted, that competition is but a phase of the race of life—the struggle for existence. Not merely is there the scramble for the means of decent livelihood; there is, besides, the intoxication of being first. Nor is this the whole matter. The general multitude prefer to have their sentiment of admiration concentrated upon one winner in a contest. The greatest opponent of the Prize system that I ever knew was De Morgan: I have heard him describe the senior wranglership at Cambridge as the upas tree which poisoned all around it. Human nature is to blame for the disproportionate exaltation of the first in a race, although winning only by half a neck. The tendency would appear to be of a piece with the love emotion, which, for its highest flight, needs concentration upon one. Whether either of these tendencies will ever be rationalised, it is not for the present generation to pronounce."

This volume appears very opportunely. In the midst of competing and conflicting methods, it is well to have the attention directed anew to a mode of handling psychological and philosophical problems that has been of great service to philosophy, but which does not always at the present moment get its due and yet cannot be ignored without loss. It is well also, after years of silence, to be brought afresh into immediate contact with the author's subtle analytic power and keen dialectic, which are always stimulating, and to be made to realise the value of felicitous illustrations for the elucidation of truth. In an emphatic manner, also, these papers bring out two traits of the author's character which deserve to be specially noted, *viz.*, his open-mindedness and his generosity towards those who differ from him.

The volume comes to us in a very pleasant form as to type and binding, and its value and utility are enhanced by the carefully-prepared abstracts prefixed to the articles.

William L. Davidson.

A History of the Problems of Philosophy. By Paul Janet and Gabriel Séailles. Translated by Ada Monahan. Edited by Henry Jones, LL.D., Professor of Moral Philosophy in the University of Glasgow. London: Macmillan & Co., Limited, 1902. Vol. i., pp. xvi, 389; vol. ii., pp. xiii, 375. Price 10s. net per volume.

There is no lack of histories of philosophy giving account of the various philosophers and their systems—some good, some bad, and some indifferent; but an unquestionable desideratum has been a history of the philosophical problems themselves, so executed as to bring out the continuity of philosophic thought and, at the same time, the advance in philosophic thinking. It is surprising that the idea of supplying this want did not occur to any one till now, or, if it did occur, that it was not carried out. The execution of it falls to the authors of the work now before us, who claim for their plan that it is "entirely new". "Our idea is, indeed, simple enough," they say, "but it does not seem to have been easy to light upon or to carry out, for to no one has it occurred before: nowhere—not in France, nor in England, nor in Italy, nor in Germany—is there a work composed on the same, or even on a similar plan." Windelband's history of philosophy at once occurs to the mind in refutation; but even that is no exception, for the plan of the two works is different. Our writers' distinctive feature lies here: "We have taken, one after another in the dogmatic order, the great problems of philosophy and given their history, indicating their origin, their various aspects and forms, and the stage they have reached in our day."

The question, then, is whether the idea thus so clearly enunciated has been satisfactorily carried out.

Take, first, the arrangement of topics. The material in these two volumes is grouped under four heads, *viz.:* Psychology, Ethics, Metaphysics, and Theodicy; and under each head leading problems are placed,—such as "The Senses and External Perception," "The Association of Ideas," "Freedom," under Psychology; "Scepticism and Certitude," under Metaphysics, and so on. This practically covers the ground; and thus far everything is quite satisfactory, although at times a topic is a little awkwardly placed, or an author's opinion given in a somewhat truncated form,—which only serves to remind us that neither sections nor topics are mutually exclusive, while, after all, there is a certain disadvantage in breaking up a philosopher's system into parts.

What then, next, of the execution of the main task? Is the historical treatment adequate? So far as presentation of the views of the writers and schools that are here included is concerned, we must say at once that the work is very carefully done. The information is compressed, yet accurate; and, as philosophers are allowed largely to speak for themselves in well-selected quotations, a special value is given to the summaries and the dryness of the bare abstract is thereby avoided. Particularly noticeable are the expositions of the Greek philosophies and of the writings of the Cartesian school. Now and again, indeed, we miss something that ought to have been stated. For example, it is not enough to characterise the Stoic criterion of truth as subjective, being laid in the conviction of the percipient. No doubt, the Stoics laid the criterion of truth in the individual percipient's conviction; but then they required that the percipient should himself be "a wise man" (that is, a man of unclouded mind, calm, careful, unbiassed), and they viewed the impressions, through whose strength and clearness his undoubted conviction came, as consentient. What they seem to have been aiming at was expression of the facts (*a*) that, in sense-perception, we suppose an

ideal or absolutely normal standard by which we test the abnormal and correct erroneous inferences, and (*b*) that true perception works into a system of experience and that impressions have their place in a coherent scheme of things. But, apart from this occasional omission of points necessary for clear apprehension, there is little to complain of regarding the presentation of philosophic views. Where the real ground of complaint lies is here, that a great many philosophers are not represented in this work at all, and others are very inadequately so. The Greeks, the Cartesians, the French philosophers in general, and the philosophers of the Scottish school all get their due; but little or no account is taken of Patristic philosophy, there are gaps in the representation of Alexandrian thought, and Scholastic philosophy finds meagre treatment, except in the section on Theodicy. Again, British philosophy and German philosophy after Kant play a very secondary part indeed. Take, for instance, the chapter on "The Association of Ideas". Less than half a page is given to Hartley; about the same amount of space is devoted to James Mill; there is no mention of Prof. Bain at all; recent views brought out in discussions in this journal and elsewhere are unnoticed. So that our writers have not been very successful in accomplishing that part of their purpose which was to present "the stage that they [the problems] have reached in our day". That is a pity; for the most modern aspects of the problems are not the least interesting nor the least important. Thus far this work is disappointing. But, on the other hand, there is a part of the task (as we have already said) that has been executed and executed well; and for that many students of philosophy will be grateful, and thanks are due to Miss Monahan and Prof. Jones for presenting these volumes in English dress.

WILLIAM L. DAVIDSON.

Outlines of Psychology: an Elementary Treatise with some Practical Applications. By JOSIAH ROYCE, Ph.D., LL.D., Professor of the History of Philosophy in Harvard University.

Prof. Royce's Book is he tells us an expansion of a formerly published Essay on the elementary principles and practical applications of psychology, with a view to its inclusion in the Teachers' Professional Library, edited by Mr. Butler. Besides its value as the contribution of so distinguished a philosopher to the starving Science of Education, it has a special interest for readers of MIND as the most systematic exposition of the writer's psychology which he has as yet given us. The Introductory chapters deal with definitions, the physical signs, nervous conditions and general features of conscious life, including one of the clearest and ablest criticisms of the "mind stuff" theory that we remember to have seen. The second and main portion of the book (chaps. v.-xiii.) rejects the usual division of modes of consciousness as the basis of discussion, substituting for it a classification of mental factors into Sensitiveness, Docility, Initiative and bringing the different phases of mental life under one or other of these heads: Sensation, Imagery, Feeling appearing as forms of Sensitiveness; Perception, Thought and Action of Docility. The last of these three factors is connected with the recent investigations of Prof. Loeb and others into the tropisms or general orientising reactions of plants and animals, effective use of which is further made in the author's account of the origin of our spatial perceptions. A further departure from orthodox text-book treatment is the recognition of a second series of feelings besides that of pleasure and pain, *viz.*, restlessness and quiescence taking the place of Wundt's two additional series of excitement

and depression, tension and relief. The third part of the book (chaps. xiv., xv.) is a suggestive and practically useful review of the varieties and "abnormities" of emotion, intellect and volition.

Prof. Royce's psychology, which is here presented in condensed form, will doubtless give rise to considerable discussion. We have only space to mention one or two points which seem open to criticism. The emphasis upon tropism as a principle of psychological explanation is a happy thought, but it is doubtful whether the opposition between docility and initiative is not pressed beyond the point where it is an instructive distinction. Docility is defined as control by our past. But such control is what we commonly mean by self-restraint or independence of the present stimulus and so far falls on the side of initiative. Mere restlessness, on the other hand, as opposed to such control is the lowest form of subjection to present impulse and might with equal propriety be taken as the type of docility. But passing this over it is still more doubtful whether anything is gained, at any rate for the class of students for whom the book is primarily designed, by the above inversion of current methods of treatment. We may grant that, as Prof. Royce claims, his classification is more fundamental than the ordinary distinction into elements of consciousness, in the sense that the mind's general attitude to stimulus is more fundamental than the features of the resulting experience. But just on that account it might be contended it is less suitable as a basis for the discussion of specific forms of consciousness, as seems to be proved by the paradoxical attempt to treat social opposition and with it conception and inference as forms (though "higher forms") of Docility and the obscurity in which "restlessness" is finally left after having been treated at one time as a form of feeling, at another (surely the true doctrine) as a more general form of instinct or conation.

But a still more fundamental point than either of these is the reproduction of a doctrine of mental development in its main outlines identical with Prof. Baldwin's well-known account based upon imitation. Prof. Royce's recent philosophical writings had led us to expect a more thorough-going criticism of the conception of Imitation than it had yet received, and we confess to a certain disappointment in finding it here employed in the older uncritical sense. Briefly, is imitation simply reproduction? If so, it is not only doubtful whether it plays any large part in mental development, but whether it plays any part at all. We may say if we like that the child reproduces in its imitative play the actions of others, but even here the important thing is not the reproduction but the modification of the actions of others to suit the particular environment and the reactions expected from it. *A fortiori* the important thing to notice in our ordinary practice is not that we repeat but that we co-operate under the general pressure of the social structure. The centre of psychological interest is not the impression which the actions of others make upon us, but the consciousness (clear or obscure) of the whole to which we and others belong as co-operative members. If it be said that what the term Imitation is intended to express is merely one aspect of a complex fact, the term, we submit, is unfortunate, and nowhere more so than when used of the process of thought. The exaggerated emphasis it leads Prof. Royce to lay upon the self-conscious element in the thought process ("one who thinks makes it part of his ideal to be conscious of how he behaves in the presence of things," p. 284) is perhaps a minor point. But the seal it seems to put on the ordinary dualistic interpretation of thought ("All science is an effort to describe facts, to set over against the real world an

imitation of it," p. 292) must appeal, we think, to the Author of *The World and the Individual* as more serious. Psychology he may tell us is not philosophy, but he would probably agree that it ought at least to be a preparation for it, and that it scarcely serves this purpose by lending itself, even by implication, to the consecration of one of the principal stumbling-blocks to a philosophical interpretation of experience.

J. H. MUIRHEAD.

The Mind of Man. GUSTAV SPILLER. London: Swan, Sonnenschein & Co., 1902. Pp. xiv, 552.

Mr. Spiller's book exhibits a combination of distinct merits with equally marked defects which is most baffling to the reviewer. To take some of the good points of the book first: the writer is evidently keenly interested in psychological study, he has read unusually widely, he shows great industry in the collection of observations upon the workings of his own mind and some ingenuity in the devising of experiments upon it. He is laudably determined to deal with the facts of mental life at first hand, and not in the least afraid to reject "authority" where it seems to him to misinterpret the facts. His style, at its best, is simple and vigorous. As if to balance these merits, he suffers from certain grave defects of taste and style. His book is almost intolerably prolix, and he has an unfortunate trick of returning again and again in successive chapters to discussions the reader had fondly believed to have been closed. He deals much too freely in the kind of loose and equivocal metaphor affected by the leader-writers of the daily newspapers. What is a more serious fault, he has the habit not only of dismissing views from which he dissents with a contempt an impartial reader must often think out of place, but of imputing unworthy motives to those who hold them. Thus, *e.g.*, in rejecting a view of Brentano, he thinks it becoming to observe that it is a misfortune for psychology that men with anti-scientific interests, like Brentano, profess to be psychologists (p. 135), and in another place declares that the opponents of Bentham's psychology have usually been animated by mere class or religious prejudice; a view which is the more remarkable since Mr. Spiller himself goes farther than any writer known to me in his opposition to the Benthamite Hedonism.

As regards the matter of his work, Mr. Spiller deserves credit for insisting on the teleological character of mental and neural process, and for treating the whole subject of psychology on the basis of the conception of organised functional needs. Yet I doubt if he really sees the implications of his own doctrine. This doubt is suggested specially by his attempt to deprive both pleasure-pain and will of genuine significance for the course of mental life. It is well enough to say "organised reaction," and not feeling or will, determines our action; but how does reaction get itself organised in the first place? I can find no intelligible answer in Mr. Spiller; indeed, if his often-repeated principle that we can do only what we have already done were the last word on the subject, it would seem impossible that life should exhibit progressive organisation at all. I fear Mr. Spiller is not sufficiently alive to the significance of his own rejection of atomistic associationism. By the way, how is his rejection of that doctrine compatible with his declaration that "psychology . . . constructs the total universe out of world-atoms, *i.e.* simplified touch feelings"? Contradictions of this kind suggest that Mr. Spiller has not altogether digested the results of his voracious reading.

The defence of introspection as a method in the Introduction is interesting, but I think Mr. Spiller overlooks the difficulty that, apart from

control by rigid conditions of experiment which can be precisely stated, his readers have no means of judging either of the exact conditions under which his observations were made, or of the accuracy with which they have been chronicled. For both these reasons his observations, *e.g.*, on the rate of obliviscence are much less available as a basis of inference than those of Ebbinghaus at which he is inclined to cavil.

A. E. Taylor.

Hegel's Logic: An Essay in Interpretation. By John Grier Hibben, Ph.D., Stuart Professor of Logic in Princeton University. New York: Charles Scribner's Sons. Pp. x, 313. Price $1.25 net.

Dr. Hibben has produced a book which was much wanted. An introduction to Hegel's system is required for those professed students of philosophy who are not able—at any rate at the commencement of their studies—to grapple with the *Logic* or even the *Encyclopædia*. It is required still more for the general reader who wants to know something of the source of those Hegelian ideas which he continually encounters in theology, in ethics, and in politics.

France has for some years had a most excellent book of this kind—*La Logique de Hegel*, by the late Georges Noel. But the Master of Balliol's volume in the Blackwood series was not quite enough. Admirable and stimulating as it is, it makes no attempt to set out the course of the dialectic process in detail, and it is in the detail of the dialectic that the strength and the difficulty of Hegel lie.

Dr. Hibben devotes 200 pages to an abstract of Hegel's tremendous argument which leads from Pure Being to the Absolute Idea. The task was difficult in the extreme, and he appears to have succeeded in it to a very remarkable degree. His exposition is always clear, and shows a thorough knowledge of the text. On some points I should be inclined to differ from him, but it would be useless to note divergencies of opinion which could not be discussed without lengthy quotations from the original. And these points are, after all, but few in comparison with those of which Dr. Hibben's treatment seems to me unquestionably correct.

J. Ellis McTaggart.

Genetic Psychology for Teachers. By C. H. Judd. International Education Series, vol. lv. New York: D. Appleton & Co., 1900. Pp. xiii, 329. Price, $1.00.

One naturally expects, on opening a book with the above title, to find a discussion of the growth of the child mind, with suggestions for schoolroom application of its results. The author's *Psychology for Teachers* is, on the contrary, the psychology of the teacher himself. Child-study is to be replaced, or at least preceded, by teacher-study. The teacher is shown, by reference to certain optical illusions, how he may improve himself in observation,—the writer seems to take it for granted that these illusions are matters of judgment; he is to analyse his own writing habit, his own reading process, his own idea of number, his own activity of attention and emotive expression, his own attitude to educational ideals, and so forth. Why all this introspective work should be termed 'genetic' is not clear. It is true that there is a good deal of talk in the book about development. and some about heredity and selection and variation: but the argument runs direct from biology to education, and the reader is expressly warned against the genetic method of current child-study.

The chapters are written in lecture form, with all the repetition and echo and personal appeal that the lecture admits of. The psychology is correspondingly diluted. On the whole, however, the psychological teaching is sound; and if the author has not written a genetic psychology for teachers, he has produced a book which it must benefit the average teacher to read. Whether he is in sympathy with the 'masterful essay,' as the publishers term it, prefixed by the editor of the series, Dr. W. T. Harris, may be regarded as doubtful.

E. B. T.

Les Grands Philosophes—Malebranche. Par HENRI JOLY. Paris: Félix Alcan, 1901. Pp. 289.

To those who desire a systematic account of Malebranche's philosophy, and yet do not care to work through the bulky tomes of Ollé-Laprune, this volume should commend itself. Malebranche, and I may add Geulincx, have not yet received adequate attention. Being treated in histories of philosophy chiefly as links of connexion between Descartes and Spinoza, the more characteristic features of their very individual systems are unfairly ignored. M. Joly's volume, as an attempt to consider Malebranche on his own merits, as the founder of a system peculiarly his own, therefore deserves a hearty welcome. For the most part it is a statement of Malebranche's philosophy in Malebranche's own words, the criticism being rather vindication and apology, with a constant insistence on the agreement of his positions with the doctrines of true religion, than a rigorous examination of its logical grounds. But if this attitude sometimes leads M. Joly to do more than justice to Malebranche's argument, it has also enabled him to expound Malebranche's teaching in a very sympathetic and suggestive manner.

The first chapter contains an interesting account of Malebranche's life, of his controversy with Arnauld, and of the preparation of his writings. The influence exercised upon his thinking by Augustine is very justly emphasised. Chapter ii. treats of the main doctrines of Malebranche's metaphysics. Here our author is chiefly concerned to defend Malebranche against the charge of Spinozism. Readers will probably differ as to the success of the defence. M. Joly himself admits (p. 99) that Malebranche is more forward in systematising his assertions than in demonstrating them, "croyant que dans cette liaison même est la démonstration la plus convaincante". The difference between Malebranche and Spinoza ultimately reduces to the fact that the one asserts while the other denies the possibility of creation. And Malebranche, admitting its incomprehensibility, supports it by merely negative arguments. As so often elsewhere, he takes refuge from his self-caused difficulties in the plea of inevitable ignorance. As I have said, however, M. Joly brings prominently into view several features in Malebranche's philosophy which, even if inconsistent with his fundamental principles, deserve more consideration than they usually receive.

Chapter iii. is devoted to Malebranche's treatment of the mysteries of the Catholic Religion—the doctrine of the Trinity, of the Incarnation, of Miracles, Original Sin, etc. M. Joly's attitude throughout this chapter, and indeed throughout the whole volume, finds expression in the following sentences (p. 206): "Je conclus: partout où Malebranche a fait preuve d'originalité et d'indépendance en face de son maître, c'est à la théologie qu'il le doit. C'est à elle aussi qu'il doit d'avoir maintenu plus fortement l'idée de la liberté devant les hérésies de son époque, et peut-être devant les témérités de sa propre métaphysique."

Chapter iv., on Malebranche's contributions to empirical psychology, is excellent. The only omission of importance, that I have noted, is the absence of all reference to his analysis of the visual perception of distance and magnitude. This is to be found in the *Réponse à M. Régis*, and to some extent anticipates, in Malebranche's very individual way, the later results of Berkeley. M. Joly also continues from chapter iii. the treatment of the problem of the freedom of the will. Again he seeks to meet all objections to Malebranche's position. On such a thorny problem there is plenty of room for difference of opinion, but surely in asserting (p. 138) that the charge against Malebranche of denying freedom is "absolument erronée" he overstates his case. A chapter on Malebranche's ethics, and a brief characterisation of his system as a whole, conclude the volume.

The reader will find useful the numerous references to Malebranche's minor works—to the *Eclaircissements*, *Lettres à M. Arnauld*, and *Réponse à M. Régis*. In these occasional writings Malebranche frequently, under the stimulus of controversy, states his positions in even more pointed and vivid fashion than in his systematic treatises. Unfortunately these writings are not very accessible. Jules Simon's very convenient edition in four volumes does not even contain the *Traité de Morale*, and the older more complete editions are no longer easily procurable. It is to be hoped that a new edition of Malebranche's works may appear before long.

NORMAN SMITH.

René Descartes, Meditationes de Prima Philosophia. Nach der pariser Originalausgabe und der erster französischen Übersetzung mit Anmerkungen herausgegeben. Von Dr. C. GÜTTLER, Professor an der Universität, München. München: Oscar Beck, 1901.

This volume should be a decided convenience to students of Descartes' Meditations. It sets alongside of one another the Latin of the original 1641 edition and the first French translation. The reader is thus ensured a correct text, and also is saved the trouble of referring to different volumes for comparison of the Latin and French renderings. Herr Güttler's purely historical introduction gives a careful statement of all that is known with regard to the origin and publication of the Meditations and of the French translation. That translation, as is well known, is authoritative. Executed by the Duc de Luynes, it was revised by Descartes himself. And in a letter to Clerselier, who translated the accompanying *Objectiones*, Descartes has declared that in parts the meaning is more adequately and clearly expressed than in the Latin. The editor intends this volume to be used as a University text-book, and accordingly has appended numerous notes to the Meditations. Of these only a few are historical or bibliographical; the rest will doubtless be of assistance to elementary students. The sole unsatisfactory feature of this very scholarly volume is the omission of the Objections. In their place the editor gives at the end of each Meditation a brief statement of the relevant Objections and Descartes's Replies. As such summarising is determined by the writer's own interpretation of Descartes's Philosophy, the otherwise impersonal character of the volume is somewhat impaired.

NORMAN SMITH.

Kant's Lehre vom Genie und die Entstehung der Kritik der Urtheilskraft. Von Dr. Otto Schlapp, an der Universität Edinburgh. Göttingen: Vandenhoeck & Reysrecht, 1901. Pp. xii, 463.

The task which Dr. Schlapp has set himself in this work was suggested by the remark which occurs in Windelband's *History of Modern Philosophy:* "Kant construes the conception of Goethe's poetry". His volume may be looked upon as the historical exposition and justification of this statement. The philosophical interpretation of Goethe's poetry can only be regarded, however, as a part of a general æsthetic theory, and thus the inquiry is strictly synonymous with the history of Kant's *Critique of Judgment*, or more particularly with that part of it which is concerned with the Critique of Taste, and the Judgment on the Beautiful. Kant's æsthetic theory is, according to the thesis of the book, not only intimately related to, but directly influenced by, his theory of genius (pp. 387-388); hence the history of the *Critique of Judgment* and that of Kant's theory of genius necessarily form one and the same inquiry.

The author gives a short Introduction to indicate the general literary spirit at work in Kant's time, and to show the intellectual and æsthetic setting over against which Kant's theory was to take shape. This is very interesting reading, and might well have been made a little longer. The main body of the work is divided into four sections: (1) The beginnings of Kant's Critique of Taste and of Genius, 1764-1775; (2) his views of genius and the æsthetic between 1775-1789; (3) those in the *Critique of Judgment* (1790); (4) those after the *Critique of Judgment.* The great interest and the chief value of Dr. Schlapp's historical survey will be found to lie in the sources which he has laid under contribution for tracing the development of Kant's views. The material he employs is for the most part quite new as yet to the student of Kant. It consists largely of hitherto unedited copies of Kant's class lectures on Logic, Metaphysic and Anthropology. These cover a period of about thirty years and were taken down and preserved by different members of his class. Of these various lectures, forming over seventy documents, only one course is reproduced in Hartenstein's edition of Kant—that on Logic edited by Jäsche (which is dated at 1800 by Hartenstein and at about 1780 by Dr. Schlapp). In addition to the class notes Dr. Schlapp also makes use of such relevant material as is to be found in Hartenstein, in Benno Erdmann's *Kant's Reflexionen*, and in the *Lose Blätter aus Kants Nachlass*, collected by Reicke. All these sources have been carefully explored for remarks, criticisms, etc., bearing on art and genius, and the result is as detailed and exhaustive a review of the history of Kant's opinions on these subjects as the most exacting *Kantforscher* could desire. Especial stress is laid on Kant's indebtedness to a little known *Essay on Genius* published in 1774 and written by a Scotsman, Alexander Gerard, who appears to have given lectures on this subject in Aberdeen. Kant expressly declares how highly he thinks of this essay (p. 244), a long extract from which is given at the end of this volume.

On the whole perhaps the first two stages above mentioned might have been put into shorter compass, though thoroughness is of course very difficult to reconcile with conciseness, more especially in a historical statement. Much of what is extracted from the lectures is little better than a round of shrewd commonplaces, Kant's satisfaction with which is no doubt due to the self-contained isolation of the detached recluse. Some judicious compression would not have lessened the value of the argument, least of all when done by such a devoted expositor. A useful summary at the end of each section recapitulates the results of the dif-

ferent periods. The third section will prove very suggestive reading, and is a careful analysis of the fundamental ideas of the first part of the *Critique of Judgment*, with a view to show their connexion with Kant's conception of genius. The conclusion of the whole inquiry given on pp. 403-424 is an admirably concise statement of the many sources from which Kant borrowed or derived his opinions.

As regards the argument of the work one may remark in the first place that there seems to have been surprisingly little change in Kant's conception of genius from first to last. Almost exactly the same views are held in the first stage as at the last; the difference being mainly one of fullness of exposition and accuracy of distinction (*cf.* p. 244 ff. and p. 314 ff.). One is astonished also to find what little first-hand knowledge Kant had of art, and indeed what extremely slight natural capacity he had for appreciating this side of experience. He could not understand music, and only knew painting and the plastic arts at second hand through Winckelmann and Mengs (p. 300). Music he regarded as an "importunate art," a remark which doubtless had its origin, as Dr. Schlapp suggests, in Kant having lived too near the Königsberg State prison, and been compelled to listen to bands when out at a military dinner (p. 328)! While again, "den Begriff des Geschmackvollen erläutert (er) . . . an der anspruchslosen Form einer Schnupftabaksdose von Papiermache" (p. 300)! Literature was the only art on which he could pass a judgment at first hand; and even here one cannot find a perfectly trustworthy guide in a critic who thought Pope's *Essay on Man* a literary masterpiece, and considered that novel reading weakened the memory and injured the character. Regarding the main thesis, one point is very significant. On the one hand, the discussion of Genius in the *Critique of Judgment* is not only very short (§§ 46-50), but admittedly falls outside the systematic division of the work itself (p. 303). Dr. Schlapp even admits with Cohen that it should have been left out altogether. His view of genius moreover in the *Critique* is, if not contradictory, at least ambiguous (pp. 329-334). On the other hand, Dr. Schlapp has sought to show that the theory of genius is the source of the conception of "formal purposiveness," of "necessity" in judgments of taste, of "*à priori* principles of taste," of a "proportion between the mental powers," of the "free and harmonious interplay of imagination and understanding"—all of which occupy a large place in Kant's *Critique of Judgment*. The theory of genius in fact gave rise to Kant's conception of the beautiful, and not conversely (p. 388). The *Critique of Judgment* is the result of fusing his theory of genius with those ideas on Taste which appear in the early lectures.

Some interesting points come out incidentally concerning Kant's general theory of knowledge. One of these may be mentioned. It appears that the idea of criticism as a scientific method first started in connexion with the analysis of Taste. Kant remarks that there can be no science of the beautiful; we can only have a "*Kritik*" (*cf.* pp. 44-45, 92). In this respect Logic and Æsthetic are considered alike, and for a long time in Kant's history are treated on similar lines, the one being a "*Kritik*" of understanding, the other of feeling.

J. B. Baillie.

L'Etica Evoluzionista: Studio sulla Filosofia Morale di Herbert Spencer. Da Guglielmo Salvadori. Torino, 1903. Pp. xv, 476.

This work falls into two main divisions, of which the first is expository, while the second, which fills rather more than half the volume, is nomin-

ally critical but really apologetic. After a preliminary sketch—based too much on second-hand and inaccurate information—of the history of ethics before Herbert Spencer, Dr. Salvadori gives us an admirable *résumé* of the Synthetic Philosophy considered as a preparation for Mr. Spencer's ethical system, followed by a careful analysis of the system itself. Then comes what I have called the apologetic portion of the work. Himself offering no criticism on doctrines which he seems to regard as absolutely true and demonstrated from beginning to end, Dr. Salvadori makes it his business to defend them against the objections of others, and chiefly against his own countrymen. English criticisms are not left unnoticed; but the author only takes these into account in so far as Mr. Spencer himself has replied to them, a procedure which is nearly equivalent to their complete omission. The Italian and to some extent the French critics have had the advantage of his first-hand study and are much more satisfactorily dealt with. In particular various objections are shown to proceed from a misunderstanding of Mr. Spencer's position which the author's greatly superior knowledge of the subject enables him very happily to dispel. But Dr. Salvadori's extreme desire to conciliate opponents has the effect of making him underrate the depth of the division which separates his master's system from that of the continental spiritualists. A theory which treats morality as deriving its whole value from the pleasure it produces cannot possibly be harmonised with theories which either make virtue an end in itself or identify the end with some form of absolute existence. Nor again can the old feud between necessity and free-will be appeased by pointing out that determinism does not in practice involve the abnegation of human responsibilities and duties. And here it may be observed that in the vain effort to conciliate irreconcilable opponents Dr. Salvadori has strained his master's principles to the breaking point. To treat consciousness as 'a factor in moral evolution' is by no means equivalent to calling it 'an active and creative energy' (p. 269). Without consciousness pleasure, the assumed end of moral action, would of course not exist; and it may be true—although it has not been proved—that without the intervention of consciousness animal organisms could not be completely adapted to their environment. But creative energy implies more than this: it implies a production of force out of nothing, which is in contradiction to the fundamental dogma of Mr. Spencer's system. Again, the description of that system as 'an agnostic monism' (p. 295) seems an illogical concession to a certain school of metaphysicians for which the master would hardly care to be made responsible. Still more objectionable is Dr. Salvadori's wholesale denunciation of the old or 'associationist' Utilitarianism (p. 439 ff.). Here the author for the greater glorification of his hero falls foul of his natural allies. Misconceptions long ago dispelled by J. S. Mill and others are dished up in a style worthy of the most rabid spiritualist; and no spiritualist could be reproached with want of discrimination for failing to see in what respect they are less applicable to 'evolutionist' than to 'empirical' morality. Indeed lectures on the impossibility of a hedonistic calculus come with a particularly ill grace from a Spencerian who discards references to the greatest happiness of mankind as we know it for references to the happiness of an ideal society about which we know—to put it mildly—considerably less. One need only apply the two competing methods to some concrete problem such as divorce or capital punishment to appreciate the difference.

I have said that Dr. Salvadori does not himself offer any criticisms on the philosophy he expounds. But his lucid style of exposition has the incidental merit of bringing out into sharper relief what to some of us

seem the unwarranted assumptions, the gaps and the incoherencies of Mr. Spencer's system.

A. W. Benn.

La Morale di T. Hobbes. Da Rodolfo Mondolfo. Verona, 1903. Pp. 278.

The object of this work—the first of a projected series of essays on the history of utilitarian morality—is to exhibit an alleged fundamental contradiction in the teaching of Hobbes which, according to the author, has escaped the notice of previous critics. After setting up as the greatest good the continual excitement and satisfaction of fresh desires, Hobbes in his political philosophy substitutes for this the mere preservation of life as such, to be secured by the establishment of an absolute government which, while maintaining order, leaves no room for the expansion of human individuality. More than this, the author of the Leviathan by placing the life no less than the property of every citizen at the absolute disposal of the supreme ruler takes away even that guarantee of bare existence for which the sacrifice of individual liberty was originally demanded. Thus Hobbes's system results in the complete negation of its own premisses.

It seems to me that Signor Mondolfo has failed to make out his case, and that Hobbes, whatever his inconsistencies in other respects, is in this instance perfectly logical. That absolutism whose cause he pleaded while denying to the private citizen all right of interfering with or criticising the government, as well as of course of making war on other citizens, leaves unhindered scope to the gratification of all his harmless desires. And Hobbes has explained this with his usual clearness in chap. xiii., sect. 15, of the *De Cive*, a passage which his critic must have read as he quotes a simile from it (p. 265), although in such a manner as totally to pervert the meaning of the original. While on the subject of references I may mention that the author sends us twice over (pp. 79 and 255) to Spinoza, *Eth.* iii., prop. 15, when apparently he means prop. 27; that on this occasion he makes Spinoza talk about sympathy *and* imitation when the two are identified in the original, sympathy being called the imitation of feeling; and that, finally, there is not the slightest evidence of Spinoza's having derived his ideas on sympathy from Malebranche, as is here too hastily assumed.

A. W. Benn.

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VIII.—PHILOSOPHICAL PERIODICALS.

Philosophical Review. Vol. xii., No. 1. **J. H. Tufts.** 'On the Genesis of Æsthetic Categories.' [The distinctive characteristics of the æsthetic judgment, or of æsthetic feeling, are due, in part at least, to the social conditions under which the æsthetic consciousness has developed. (1) This consciousness, in its beginnings, is connected with art rather than with nature. (2) Its relation to art is not that of cause, but that of effect. It has arisen, chiefly or wholly, from other springs, and has itself created the sense by which it is enjoyed. (3) Art has its origin, almost without exception, in social relations; it has developed under social pressure; it has been fostered by social occasions; it has, in turn, subserved social ends.] **C. V. Tower.** 'An Interpretation of Some Aspects of the Self.' ["Any experience is both objective or presentational and ideal. It must, therefore, be interpreted in terms which express not only its presentational aspect, but those ideal relations which are made known to us through the experience of what we term self. . . . The self is a symbol, like any 'thing' named and characterised. . . . It is not an entity, but a law, which, like any other law, denotes a unique type of relationship within experience, its inner and individual aspect which the presentational method of science cannot reach. And the individual is at the centre of that law, as to all other laws he is external."] **J. D. Stoops.** 'The Real Self.' [A somewhat rhapsodic paper, maintaining that "the chasm between personality, conscious selfhood, humanity, and that which is not human, not conscious of selfhood, be it animate or inanimate, is the greatest chasm in the whole known universe".] **A. K. Rogers.** 'Professor Royce and Monism.' ["The attempt to make what we call human experience an identical part of a comprehensive and all-knowing experience involves a confusion between the existence of a state as a fact of immediate feeling, and a subsequent knowledge of that state, separated from it empirically by an interval of time. When we carry the problem over to the Absolute, for whom there cannot be such a past experience, limited within itself and temporarily unconscious of anything beyond its own limited content, it involves the assumption that a particular element of consciousness can be taken as an absolute piece of existence, whose nature is not influenced by the character of its associates." The difficulty may be avoided if we suppose that ultimate reality exists, not in the form of truth, *i.e.*, of thought or knowledge or intellectual synthesis (Royce), but in the form of active purpose. God thus becomes a member of a community, but without the limitations and the ignorance of men. The ultimate concept for the understanding of the universe is not self-consciousness, but a society of selves.] Reviews of Books. Summaries of Articles. Notices of New Books. Notes. No. 2. **A. T. Ormond.** 'Philosophy and Its Correlations.' [President's Address at the second meeting of the American Philosophical Association, 30th December, 1902.

The value of philosophy is often called in question; how shall it vindicate itself against current scepticism? In three ways. (1) By defining some point of view that is clearly philosophical, so that the complete occupation of this point of view will have the effect of translating an inquiry into one that is distinctly philosophical: this is the point of view from which consciousness is central in the world, and the world itself to be construed in terms of those activities by which consciousness reaches its content of realised experience; (2) by determining some concept of method that will stamp as distinctly philosophical any inquiry that conforms to its requirements: this method takes its departure from the heart of consciousness itself, and seeks to interpret the world in the light of the central effort of consciousness, attaining as its final result an interpretation of the world that reduces it directly to terms of reason and purpose; (3) by defining a criterion that is distinctly philosophical and that will, therefore, stand as the ultimate test of philosophical validity: this criterion is reasonableness, itself referable to an absolute experience. One great need of the sciences and philosophy, at present, is unification under some comprehending and synthetic concept of knowledge: workers in both fields should hold this larger ideal of knowledge as an article of faith. It will "help us in completing our ideals of being and of truth and duty".] **G. T. Ladd.** 'Prolegomena to an Argument for the Being of God.' [(1) The universality of religion is now a demonstrated fact. (2) Psychology (so far as it does not fall into the mistakes of anthropology) shows that the entire soul of man is concerned in and constitutionally committed to religion. The conception of God which has a preferred claim to reality is that which will satisfy all the demands of the soul of man in its historical development. (3) Important for the argument are a right solution of the problem of knowledge; the world-view of spiritual monism; and the cultivation of comprehensive and profound ideas of value.] **D. Irons.** 'Rationalism in Modern Ethics.' [An historical study of modern rationalism, from its first appearance in opposition to Hobbes, through Cudworth, Clarke, Wollaston, the moral sense theories of Shaftesbury and Hutcheson, Hume, the intuitionism of Price, and the abstract rationalism of Kant. "The rationalistic point of view develops under the influence of the conviction that the chief characteristic of morality is the unconditional nature of its demands. . . . Moral laws must be derived from reason, for reason alone gives rise to principles which are unconditionally valid. The criterion of reason, *i.e.*, absence of contradiction, must therefore be the criterion of right. . . . Moral action is identical with rational activity.] Reviews of Books. Summaries of Articles. Notices of New Books. Notes.

Psychological Review. Vol. ix., No. 6. **T. L. Bolton.** 'A Biological View of Perception.' ["Perception is an attitude toward an object, as well as a complex of sensations, the attitude being characteristic of the object. . . . When the reaction which the object provokes in an animal is imperfect and can be improved by successive trials, or when the instinctive performance may be modified by experience, . . . consciousness comes to have functional value, and the material it uses to modify the performance is presented by the currents that flow backward from the organism during activity and are initiated by the movements the organism makes. . . . The back-stroke effects come first, and only as discrimination grows and rises to higher importance do the different afferent effects increase in significance; but they are always bound up with back-stroke effects. . . . Immediate appreciation of direct sensory effects is . . . less common than we suppose: . . . the perceptions (of intellec-

tually minded persons), like all perceptions, are little more than refined emotions."] **G. M. Stratton.** 'Studies from the Psychological Laboratory of the University of California.'—VI. **A. Robertson.** 'Geometric-optical Illusions of Touch.' [In many cases, there is an illusion of active touch tending in the same direction as the corresponding illusion of sight: so in the arrow-head and feather figure, in convergent lines, in the perception of angles, in contours, in ring segments. In the case of interrupted *vs.* uninterrupted lines, the direction of illusion runs counter to that of sight (*cf.* Parrish's work with passive touch), as it does also in the case of Poggendorff's figure. Quantitative determinations were made on the two last points.] **G. A. Tawney.** 'Feeling and Self-Awareness.' ["Thought and feeling cannot be separated or contrasted without destroying the reality of both. Thoughts are always shared experiences, while feelings are private and unshared; thoughts are always universal and in reference objective, while feelings are always particular and in reference subjective. Feeling is . . . an attributive element in self-consciousness; . . . in feeling, in other words, we experience immediately the relation of the ego to its object, a relation of unity or diversity which the ego itself establishes. . . . As to the content of self-consciousness, . . . self-consciousness as immediate self-awareness includes the empirical qualities of the body itself, together with a sense of externality to everything else within the range of perception or memory. Reflective self-consciousness is based upon the recognition that the self belongs in classes with other selves, that it is in a sense one with them, and that its experiences therefore possess a significance for them, and theirs for it. All feelings acquire a social reference, a universality of reference, from reflexion. . . . The relational emotions are simply reflective feelings which are immediately connected with the activities of the ego. . . . We may properly speak of the emotions of the logical processes and of volition," but not of an emotional logic of the emotions.] Discussion and Reports. **J. M. Baldwin.** 'Dr. Bosanquet on Imitation.' [The theory of selective thinking as a genetic account of the systematic character of thought; 'resemblance' *vs.* 'identity in difference'. The question of publicity: "Shall we assume at a stroke social organisation through a number of minds acting—thinking—alike on the same material, or shall we ask by what type of actual social experience they accomplish this?"] **P. Hughes.** 'Methods of Testing Relative Pitch.' [Criticism of methods of Gilbert and of the Columbia University tests. Proposed single test with two wires, and class test with forks.] Psychological Literature. New Books. Notes. Indexes.

American Journal of Psychology. Vol. xiii., No. 4. **O. G. Libby.** 'The Bird Lover as a Scientist.' [Plea for amateur observation of birds, in the field, with a view to biological and psychological results. Two specimens of the work are given: (1) sets of measurements upon the red-winged blackbird, the outcome of which is of value for the study of variation and specific differences; (2) charts of the passage of migrating birds across the face of the full moon: the data are useful to the student of the psychology of instinct. Suggestive remarks, especially regarding adaptation, are scattered throughout the article.] **R. Macdougall.** 'Minor Investigations in Sense Perception.—I. On Determination of the Subjective Horizon by Motor Co-ordination.—II. The Relation of Saturation in Homogeneous Colours to the Area over which the Colour is Spread.—III. The Quantitative Relations of Stimulation-area and Colour-threshold in Discrete as Compared with Continuous Extents.' [The first and most important of these Studies is a continuation of a paper published in the *Psychological Review, Monograph Supplement*, No.

17, on the subjective determination of the primary point of regard. The present article discusses "the relation of the subjective horizon of the eyes, as determined by raising the index finger, to its position when determined visually; and the influence upon such location of changes in the orientation of the head and eyes". The conclusion is that "these forms of spatial orientation are related to oculomotor conditions, and the direction of the characteristic errors which they present are dependent upon the co-ordination of eye and hand in the perception-reactions of ordinary practical life". The two latter papers offer merely general results; the author's method is inadequate to his problems.] **F. W. Bagley.** 'An Investigation of Fechner's Colours.' [A detailed study of the colours of the 'artificial spectrum top' under careful experimental conditions. Especially interesting are the author's results with regard to the production of a subjective yellow. She finds the phenomena incompatible with any tricomponent theory, and readily explicable by such an hypothesis as the Ebbinghaus modification of Hering's well-known views. The article is rich in introspective data, and the method of work is simple and accurate.] **J. W. Slaughter.** 'A Preliminary Study of the Behaviour of Mental Images.' [Observation of mental images, by trained observers, during ten seconds, with record of introspections. Visual images (black square on white, circle, ace of hearts, letter A, etc.): extent and schematism of the inner visual field (black field with square of twenty-five red spots); motor and motion images (pendulum ready to swing, etc.): auditory images (fork, dripping water, etc.): cutaneous, gustatory and olfactory images: spatial localisation of images. Results: (1) visual images are kept clear partly by their own internal organisation, partly by their combination with motor elements; (2) auditory images appear only together with an organised associative situation, in which motor elements usually play the leading part; (3) other images also require such a situation,—this, indeed, being in mos cases all that appears, so that the real existence of the images may be considered doubtful.] **S. P. Hayes.** 'An Historical Study of the Edwardean Revivals.' [Sketch of the state of religious opinion and practice in New England before 1727. The revivals of 1734-5 (Edwards) and 1740-1 (Whitefield). The Old Lights (preach morality and the use of the means of grace, but leave conversion to God, patiently awaiting His action) and the New Lights (preach the Edwardean paradox: "we are helpless to do anything good until God inclines our wills to Him, but it is still our duty to 'press into the kingdom'"): the revival activity of the New Lights (Edwards as moderate, Davenport as extremist), and its criticism by Chauncy (charges of error in doctrine and practice: appeal to emotions, censoriousness, claim of immediate inspiration, itinerant preaching); positive doctrines of Chauncy on the true work of the Spirit. Edwards' defence of revivals: his views on the nature of the affections, of true religion, of conversion; on natural inability, and on the fruits of the Spirit in life and conduct. Subsequent religious apathy till the end of the century.] Literature. Indices.

L'Année Psychologique. Edited by A. Binet, etc. Paris: Schleicher Frères et Cie, 1902. Pp. 757. In addition to the original memoirs and the bibliographical analyses and discussions, the Psychological Year-book for 1902 is provided with a bibliographical index, and forms accordingly a very complete guide to the work of the year. The first of the memoirs is by **V. Henri**, on the 'Education of the Memory'; it gives an attractively clear analysis of the processes involved in Recollection, and of the conditions on which they depend, a summary of experimental results in this field, and some practical suggestions to the educator. The chief value of

the paper is perhaps in its hints on method in interpreting results of experiment;—the *reproduction* of an impression and its *recognition*, the *exactness* of a recollection and the subject's *assurance* of its exactness, the concrete memory-image and the abstract representation—these are distinctions which must be constantly kept in mind, as the processes themselves depend on different conditions and are under different laws. With this paper may be taken those of **Larguier de Bancels** on 'Methods of Memorising,' and on 'Variations of Memory during the Day'. The former proves, so far as the experiments go, the advantage of "learning by wholes" over "learning by parts" in regard to the more persistent and accurate retention of what is learned. (Miss Steffens's study of Memory had shown the former method to be more economical both as to the time occupied in learning and as to the number of repetitions required for stamping a given poem, etc., upon the mind.) But M. de Bancels' method was carelessly conceived and only gradually perfected as the experiments continued, and the number of the latter under the best conditions is too small for any decisive conclusion to be drawn. The note on variations of memory records some experiments of the writer, in which he himself was the subject, and which tend to prove that we learn more easily and receive an impression more firmly just after a meal than at any other time of the day; the difference is so slight that no one would be inclined to risk his digestion over it, but, such as it is, it is accounted for by the increased circulation after meals, indicated by the higher pulse-rate. **Dr. Féré** contributes three papers based on experiments with Mosso's Ergograph. The conclusions of the first, on the 'Influence of Rhythm upon Work,' are: (1) That movements in relatively slow time produce more work than movements in relatively fast, but that the effect of a change of rate is greater for the right than for the left hand; (2) that varying the rhythm of movement during work causes at first a "progressive excitation," which is, however, followed by a rapid depression, showing an acceleration of fatigue; again there are differences of effect upon right- and upon left-handed work. The second paper is on the 'Alternation of Activities,' and contains some interesting results. It is known that in deep sleep the work of reflex-responses is taken over by the right hemisphere, and that in great fatigue an activity is automatically transferred from one hemisphere to the other; Féré has also shown (*Comptes Rendus Biol.*, 1901) that when the two hands are being employed together in ergograph work, there are constant oscillations in the quantity of work done by each, but the maximum activity of the right coincides with the minimum activity of the left hand and *vice versâ*. The experiments reported here give additional proof, and show that the effect—heightening of the activity of one hand, accompanied by depression of that of the other—is increased by one-sided sensory excitations, by previous exercise of one or other hand, by the suggestion of movement on the part of the experimenter, etc. It can be shown also, according to Dr. Féré, that actions to which the right hand is apprenticed are learned by the left without practice, *i.e.*, one hemisphere is educated sympathetically along with the other. In a third paper, on the 'Influence of some Neural Poisons upon Work,' it is demonstrated that the effect of stimulative poisons is the same as that of narcotics (Bernard's Law): there is first a period of heightened activity (in which the output of work is high above the normal); this is followed more or less rapidly by a decreased activity, much more marked than that of normal fatigue. In some 'Notes on Attention,' **M. Aars** suggests that the indispensable factor in all attention is the expectation of a coming presentation, to which expectation a special nervous process corresponds: this on its part explains the inhibition of

other ideas and feelings. Thus *passive* attention is a state of *pure expectation* of a certain intensity. The expectation is not capable of reduction to simpler factors, it must for example be *added* to images in order that they may represent the future and not the past: on its side it accounts for the increased intensity and clearness of the presentation when it arrives. This paper is followed by an interesting study of 'Mirror-writing,' by **G. Abt.** The subjects were normal adults and children, both normal and defective. The best conditions for spontaneous mirror-writing with the left hand he found in those who did not visualise the forms of the letters in writing, but who imaged rather the *movements* necessary for their tracing. The movements, imagined part by part, are exactly the same for the left hand going from right to left, as for the right hand in the opposite direction: while the reason for the choice of the former direction for the left hand is that centrifugal movements are easier than centripetal. **M. Marage** contributes a full appreciation and critique of 'Recent Works Published in France on Phonation and Audition' (Guillemin, Rousselot, Marichelle, Gellé and Bonnier). On the ground of some 'Experiments on Estimating Weights,' **M. Renault d'Allonnes** holds that every perception is the resultant of a process of "circular activity," involving a series of hypotheses, successively tested by reference to the original object. **M. Bourdon's** 'Researches on Habit' prove experimentally, for varied types of work, the long persistence of the effects of habituation: even after seven years' disuse, the initial time of an operation was shorter, the errors fewer, and the progress more rapid than in the original experiments. There remain several papers by **M. Binet** on Cephalometry: the 'Growth of the Skull and of the Face in Normals' between four and eighteen years of age [the skull as a whole develops in the proportion of 12 per cent., while the face develops in that of 24 per cent., but the rate of growth is not uniform, an acceleration occurring at puberty, again more marked in the face than in the skull];—'Correlation of Cephalic Measures' [compensation is not the rule in cranial development, if one measure is very large, the others will probably prove to be also very large; some diameters vary along with, others independently of, each other];—'Studies of the Crania of the Blind and of Deaf-mutes, at Different Ages' [disproving the idea that the tendency towards microcephaly in certain diameters arises from atrophy of the sensory centres in the brain.]

ZEITSCHRIFT FÜR PSYCHOLOGIE UND PHYSIOLOGIE DER SINNESORGANE. Bd. xxxi., Heft 2. **M. Sachs** und **J. Meller.** 'Untersuchungen über die optische und haptische Lokalisation bei Neigungen um eine sagittale Achse.' [Experiments, by aid of an extremely ingenious apparatus (1) with head inclined, body upright; (2) with body inclined, head upright; and (3) with head and body inclined together in the same direction, upon the position of the apparent vertical (optical and haptical) and the apparent position of head and body (haptical). In (1) the apparent verticals tend in the direction opposite to the inclination of the head; in (2) they go with the inclination of the body; in (3) the haptical goes with, the optical against, the combined head-body inclination. Inclinations of the body with head upright, and inclinations of the head with body upright, are both alike (haptically) underestimated. "While we are not able to show separately the influence of the separate sensation categories upon our idea of direction in space, we are justified (in view of the difference of position of the apparent vertical, according as optical or haptical sensations predominate in its determination) in regarding our results as a proof *a fortiori* of the specificity of the sensations endowed with the spatial quale." The results as a whole indicate the mosaic

character of our space formations.] **E. Wiersma.** 'Untersuchungen über die sogenannten Aufmerksamkeitsschwankungen.'—III. [Experiments on normal fluctuations of attention, and on fluctuations during induced abnormal states of consciousness, have pointed to a central origin of the changes in perception. The present paper seeks to confirm these two arguments by experiments upon the insane. Seven cases are reported. "The capacity of perception is influenced by mental derangements of various kinds. Depressive derangements clearly exert an inhibitive influence; nothing definite can be said of the effects of exaltation." An account of experiments on epileptics is promised for the near future.] **H. Feilchenfeld.** 'Zur Lageschätzung bei seitlichen Kopfneigungen.' [If the head is inclined towards the shoulder, a vertical light line in a dark field is (apparently) inclined in the opposite direction (Aubert's phenomenon). The phenomenon is almost mathematically constant; but there are fluctuations, uncertainties, which do not affect the final result, but nevertheless call for explanation.—When double vision occurs, it is to be subsumed to an extension of Hering's law that the space of binocular regard is smaller than the portion of the space of regard common to both eyes: the extension runs, "The space of binocular regard is also smaller with inclined head than it is with head upright". The explanation is to be found in the unusual nature of the required innervations; the synergic movements necessary for binocular single vision have not been practised.—The general phenomenon cannot be referred to compensatory torsion, to underestimation of the inclination of the head (Helmholtz), or to forgetfulness of the inclination (Aubert). Knowledge of the position of head and eyes is just as complete or incomplete as it normally is; what the phenomenon shows is the inadequacy of this knowledge as the sole condition of localisation. Here, then, is the key to the paradoxical constancy and inconstancy of the illusion. The reason that the illusion appears only in the dark is given by genetic (empirical) considerations. "Die Umwertung ist unter dem Einflusse der Erfahrungsmotive entstanden, hat sich aber im allgemeinen von demselben freigemacht."—Experiments in which empirical motives are ruled out, and the movements of the object correspond to those of the head (*i.e.*, in which the compensatory eye-movement of rotation about the frontal and vertical axes is rendered superfluous), give no illusion during the movement of inclination towards the shoulder.—Criticisms of Sachs' nativistic view of the Umwertung: "sie hat bei ihm nicht mehr den labilen Charakter einer werdenden oder gewordenen Einrichtung, sendern den eines präcise funktionierenden Mechanismus." Test experiments upon deaf mutes prove the incompleteness of the Umwertung.] Literaturbericht.

Philosophische Studien. Bd. xviii., Heft 4. **D. Awramoff.** 'Arbeit und Rhythmus.' [A study of the influence of rhythm upon three modes of work: lifting weights, reacting to stimulus by lifting weights, and writing. The results are given in great detail, and we can here quote only a few of the more important. (1) *Lifting weights: quantity of work.* Every observer has his own rate of work, which however varies within certain limits. At this rate, less work is done, but it is done with pleasure; with prescribed rates, more work is done, with greater output of energy. The quicker the prescribed rate, the greater the increase in quantity of work; but the accompanying feeling changes from pleasant to unpleasant, and then to positively painful. There is a special rate for the lifting of a given weight. The height of lift is more regular with a natural than with prescribed rates. (2) *Lifting weights: quality.* Every observer works most effectively at his own rate. The positive effect of rhythm upon conscious-

ness is shown chiefly in warming-up and getting into swing. Attention is of great importance: the feelings (which vary as for quantity) are merely concomitant phenomena. (3) *Reaction experiments.* For every observer there is an optimal rate for a rhythmical series of reactions. As the rate increases the time of reaction and the length and height of the curve of lift are reduced; at a very quick rate, the curves have practically the same form for all observers. Rhythm and mastery of the work (automatism) increase the regularity of the reactions. Every weight has its special rate. The amount of weight employed, however, affects simply the form of the curves of lift, not their height or length or the time of reaction. The individual reaction time is affected by rhythm only within narrow limits. (4) *Writing.* Preliminary report of results (to be published in full later) as regards the influence of rate, the pressure exerted in writing, the innervation of writing movements, types of writing (masculine, feminine, childish) and their characteristics, and the general conditions of writing.] **W. Wirth.** 'Der Fechner-Helmholtzsche Satz über negative Nachbilder und seine Analogien.' [(1) *Observational.* The perception of a uniformly coloured surface, after long fixation of a brightness or colour difference, shows subjective differences, which can be compensated by the withdrawal of the same fraction of the fatiguing stimuli from those portions of the visual field which have been fatigued by them. This fraction may be considered as the value of a determinate after-image under the different conditions of reaction. The value of all negative after-images is for all qualities directly proportional to the intensity of the reacting stimulus (Fechner-Helmholtz law). The ratio of the intensities, in which the different colour tones react with equal absolute values to a pure brightness after-image, varies from the equality of their apparent brightness as follows: the equivalent reacting intensity is brighter in yellow than in blue, while pure red and green have an intermediate value. The law holds, for all fatigue and for all reaction colours, that the values of coloured after-images correspond approximately to their value of equivalence for brightness after-images. The fatigue colour reacts relatively most strongly, the complementary colour least strongly. All these statements apply, in practically the same degree, to bright and dark adaptation. The after-image may be considered as a modification of visual sensation, decreasing continuously with the cessation of fatigue influences, and persisting throughout the whole course of the process. It disappears the more quickly, on the various reacting stimuli, the greater its absolute value on the occurrence of the new stimulus. (2) *Theoretical.* The brightness difference of the equivalent reacting intensities is explicable from the effect of the colour tone on the total mental impression of brightness, apart from the independent colourless process: this is not to be confused with the 'specific brightness' of Hering and Hillebrand. All after-images may be explained in two ways: either as the result of simple changes of excitability in the normal substrates, or as due to the coexcitation of an independent remainder substrate, proportionately to the reacting intensity. The former hypothesis requires the further assumption of a diffusion of every stimulus-effect over the entire colour substrate as understood by a four-component theory (best taken as simplest case of Wundt's periodicity theory): it affords the simplest explanation of brightness after-images. The latter hypothesis requires the assumption of an excitation of a secondary substrate, in its specific after-image quality, by all stimuli: as applied to brightness after-images, it requires still other auxiliary hypotheses. It can be harmonised more readily than its rival with a general theory of colour vision.] **W. Wirth.** 'Das Spiegeltachistoskop'; 'Ein neuer Apparat für Gedächtnissversuche

mit sprungweise fortschreitender Exposition ruhender Gesichtsobjecte'. [Description of new instruments.] **W. Gent.** 'Volumpulscurven bei Gefühlen und Affecten.' [A plethysmographic study of the bodily expression of affective and emotive processes, assuming the correctness of Wundt's tridimensional theory of feeling. We cite only the effects upon pulse. (1) *Feelings.* Tension gives a slowing of pulse, both as momentary and as chronic feeling; relaxation a quickened pulse; tension and activity together give slowing or quickening, according as the one or other feeling predominates (activity is regarded as a resultant of tension and excitement); unpleasantness, tension and excitement together give a reduction of the height of the pulse curve under the influence of unpleasantness; pleasantness and tension together heighten the pulse, the rate of which is variable; excitement heightens and slows the pulse beats; tranquilisation reduces and lengthens them. (2) *Emotions.* Exciting emotion quickens the pulse; pleasant emotion gives a quickening of pulse followed by a slowing, while the height of the curve is either heightened or not affected; asthenic unpleasant emotion lengthens the pulse, with reduction of height; sthenic unpleasant emotion quickens it, with similar reduction.] **W. Wundt.** 'Schlusswort des Herausgebers.' Bd. xix., xx. These two volumes of the *Philos. Studien* were prepared by Wundt's former pupils, and handed to him on the occasion of his seventieth birthday, 16th Aug., 1902. With them the publication of the *Studien*, under Wundt's exclusive editorship, ceases. The place of the *Studien* is to be taken by the *Archiv f. d. gesammte Psychologie*, edited with the co-operation of Wundt and others by Prof. Meumann of Zurich.

Philosophisches Jahrbuch. Bd. xv. Heft 3. **C. Gutberlet.** 'Eine Ethik des freien Wollens.' [This article is a critique of Max Wentscher's *Ethik*, not always friendly, although the book admits free-will. It is objected chiefly that the dependence of our will upon that of God, without which no morality is possible, is set aside, and a sort of independent moral substituted. There is also something to say against the author's very idea of Free-will.] **Hermann Sträter.** 'Eine modernes Moralsystem.' [The writer points out that the principles of Wundt would turn all morality, all culture, all religion into an illusion; and concludes by saying that his system is like a garden full of beautiful flowers and fruits but all tainted with poison. The poison is Pantheism.] **Th. Isenkrape.** 'Der Begriff der Zeit.' [In this, the second of three papers, the writer endeavours to prove that an infinite multitude of things, actually existing, is an absolute impossibility, in whatever sense Infinite be taken—whether as 'without limits,' or 'what cannot be thought of as greater' or 'greater than any finite quantity'.] **St. Schindele.** 'Die Aristotelische Ethik.' [Aristotle, the writer goes on to say, places the highest good in contemplation; he sets God out of the question, for God neither created, nor made, nor knows the world; happiness is an intellectual activity of the soul, *quâ* virtuous; virtue is an habitual preference of the mean between extremes; many passages seem to show that Aristotle was an Indeterminist.] **R. Niestroj.** 'Uber die Willensfreiheit nach Leibniz.' [The writer concludes by showing how Leibniz' stern Determinism encroached even upon God's freedom, forcing Him to choose the best possible plan of the universe, and to change nothing in the plan. Miracles are out of the question; wonders are only part of the plan of nature. What he calls liberty, is exactly the same as necessity.] Bd. xv. Heft 4. **St. Dunin Borkowski.** 'Zur Geschichte der ältesten Philosophie.' [This article deals with the most recent writers on the ancient philosophers of the East, and especially with the work of Prof. Straszewski (Straschewski)

of Cracow University, 'The History of Philosophy in the East,' which he praises very highly, examining in detail the part of the work which treats of philosophy in China.] **A. M. Steil.** 'Das Theorem der menschlichen Weseneinheit in consequenter Durchfuhrung.' [In this, the first of two papers, the author points out the essential union of soul and body to form one being, man. It is a kind of union which transcends all imagination, and all the theories which strive to give an imaginable representation of this union are false and self-contradictory. We cannot imagine a *substantia incompleta quoad naturam*, such as are both body and soul, if thought apart. Only the man, the compound, is a complete nature, and the subject of all mental and physical phenomena; in man the soul is one with the body.] **E. Rolf.** 'Die Unsterblichkeit der Seele nach der Beweisführung bei Plato und Aristoteles.' [This paper, also the first of two articles, is devoted to a long examination of the proofs of the immortality of the soul as given by Plato, especially in his *Phædo*, with a critical appreciation of the strong and the weak points in those proofs.] **Gr. v. Holtum.** 'Vom Individuations-princip.' [What is the principle of individuation, or the intrinsic principle which makes any individual being to be that individual? This Scholastic problem is solved by the author on the old Scholastic lines; individuation proceeds from the *materia prima signata quantitate.*]

Rivista Filosofica. Anno v., vol. vi., fasc. i. January-February, 1903. **F. Bonatelli.** 'Alcuni schiaramenti intorno alla natura del conoscere, del volere, della coscienza e della percezione.' [In reference to an account of his philosophy by Mr. James Lindsay in the *Proceedings of the Aristotelian Society* the author takes occasion to restate and defend his views respecting the infinite self-reflexion of thought and will, the concept of consciousness as the root of every intellectual fact, and the nature of perception.] **G. Zuccante.** 'La Donna nella Dottrina di Socrate.' [Brings together a number of passages, chiefly from Xenophan, exhibiting the feminist tendencies of the Socratic philosophy.] **V. Alemanni.** 'La filosofia di Pietro Ceretti' (*cont. e fine*). [Inverting the method of his master, Hegel, Ceretti begins with the concept, whence he passes through the philosophy of Reflexion to the absolute Being which is consciousness.] **G. Rigoni.** 'I metodi psicofisici.' [After detailing certain modern methods for the determination of minimal perceptions, the author seems to express a rather unfavourable opinion as to their psychological value, and doubts the possibility of discovering truth by recording errors whose distance from the truth cannot be fixed owing to their variability.] **R. Mondolfo.** 'L' educazione secondo il Romagnosi.' [In educational theory Romagnosi was an eclectic who combined the method of Rousseau with the methods of Condillac, Pestalozzi, Lancaster and Owen.] **C. Cantoni.** 'L' ultimo carteggio di Kant.' [Quotes from the last volume of his correspondence proofs of the enthusiastic veneration with which Kant was regarded by many of his contemporaries, and of his own confidence in the all-sufficiency of his philosophy.] Rassegna Bibliografica, etc. Fasc. ii. March-April. **G. Villa.** 'Dei caratteri e delle tendenze della filosofia contemporanea.' [The chief feature in recent speculation is the renewed prominence given to psychology, the immense philosophical importance of which has again become recognised as against the method that would treat it like any other special science; while within psychology itself introspection has held its ground against the exclusive claims of biology and sociology. But the former by its theory of evolution, and the latter by its conception of aggregate souls have made contributions of extraordinary value to the right understanding of mental phenomena. In epistemology the critical

or neo-Kantian method holds the field. In ethics human interests as defined by human experience have carried the day against all attempts to regulate conduct by the idea of a transcendent good; while the foundation of morality is sought in feeling and will rather than in intelligence.] **F. Bonatelli.** 'Alcuni schiaramenti,' etc. [Continues and concludes the exposition of his philosophy as a system of reasoned realism. The natural sciences give us a knowledge, incomplete, indeed, but true so far as it goes of things in themselves.] **R. Mondolfo.** 'L' educazione secondo il Romagnosi' (*cont. e fine*). [Writing early in the nineteenth century Romagnosi advocated a system of universal, compulsory, gratuitous and secular education.] Rassegna Bibliografica, etc.

IX.—NOTES.

MIND ASSOCIATION.

THE following gentleman has joined the Association since the printing of last number :—

JAMES (Rev. J. G.), 192 Sherborne Road, Yeovil.

The annual General Meeting of the Association will be held in University College, London, at 4.30 P.M., on 31st October, to hear reports and elect officers.

Those who wish to join the Association should communicate with the Hon. Secretary, Mr. HENRY STURT, 5 Park Terrace, Oxford; or with the Hon. Treasurer, Mr. F. C. S. SCHILLER, Corpus Christi College, Oxford, to whom subscriptions should be paid.

Members resident in U.S.A. may, if they choose, pay their subscription ($5) into the account of the Treasurer (Mr. F. C. S. SCHILLER) at the Fifth Avenue Bank, corner of 44th Street, New York, U.S.A.

DEATH OF PROFESSOR BAIN.

We regret to announce the death of Dr. Alexander Bain, on 18th September. Obituary notice will appear in our next.

RECENT APPOINTMENTS.

Mr. W. Caldwell and Mr. A. E. Taylor have recently been appointed to Professorships of Philosophy in the University of Montreal.

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